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DEVOTED TO

Agriculture, Horticulture, and Rural Economy.

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THE SIGNAL SERVICE WEATHER REPORT.

WHAT THEY ARE, AND THE BENEFIT TO BE DERIVED FROM THEM.

Have the readers of the *Farmer* ever heard of the old English Almanac makers? Of Partridge, whom Dean Swift nearly worried to death by gravely asserting that he *was* dead? Of Francis Moore, physician, and of Zadkiel? The almanacs that once were circulated under these names were curious productions, full of lucky and unlucky astrological signs, astounding medical directions, and confident weather reports. Nothing could shake the faith of the lower class of the people in their predictions.—Medicine was refused, even if prescribed by a physician, if the authority of the almanac was unfavorable.

One incident, given by an old chronicle as occuring in 1524, will illustrate the reliance placed upon the foreknowledge of these pretended prophets as to the coming of storms, inundations, and changes of weather. It appeared that in the above year "through books of prognostication, foreshadowing much hurt to come by water and flood, many persons withdrew themselves to high grounds for fear of drowning; especially one Bolton, Prior of St. Bartholomew's, in Smithfield, who went and built him a house upon Harrow on the Hill, and made provision in it for two months. These great waters should have fallen in February; but no such thing happening, the astronomers excused themselves by saying that in the computation they had miscounted a hundred years."

Many of the almanacs of which we have spoken, pruned only of their more prominent absurdities, continued to drag out an existence, becoming annually more precarious, down to the year 1871.—We have seen it recently stated, however, that in this present year only one of them—"Zadkiel,"—will be published in London. We presume that 'Zadkiel" will soon follow its companions, and become a thing of the past. The prognostications and predictions of these almanacs have come of late years to be regarded as the merest farce. We only notice them now because their publication up to the present time shows that credulity dies hard.

These old and once famous almanacs bring into more forcible prominence the system, extent, and comparative certainty, of our modern meteorological observations. These, which were once entirely in the hands of knaves and empirics, have now been made the basis of what is beginning to be justly called "a science." The advance we have gained in meteorology is most strikingly displayed in the daily reports of the weather, which, though but recently commenced by the United States Government, have already been continued long enough to demonstrate that, in very many respects, they will prove of great practical value to the commercial interests of the country.

This, of itself, is a result that amply justifies the establishment of this branch of the signal service. The question now is, are these reports capable of being made equally useful to the farming community? It is one that admits of more doubt. To the most sanguine advocates of the system, it seems in the highest degree probable that they will become peculiarly valuable to the farmer when the working of the bureau becomes more thoroughly systematized, and a wider knowledge of the laws governing the changes of the weather is gained by the official observers. It is well, therefore, for every farmer to possess some information as to the daily bulletin issued from Washington, and published in all the city papers.

"Telegraph stations have been organized from Portland, Maine, to Key West, Florida, and from New York to San Francisco, from which are telegraphed to one central office the state of the thermometer and barometer, the relative humidity of the air, direction of the wind, its velocity and pres-

sure, amount of cloud, rain fall, and general state of the weather, as well as any other particulars worthy of notice."

The whole border of the United States is circled by these signal stations; while, in the interior, observers have been placed at all important points.—The moment a storm enters within these limits, it is signalled and its course followed until it passes beyond our boundaries. Three times a day, we believe, the reports from the various stations are sent to the principle office in Washington. There they are collated, and from a careful comparison, the conclusions as to the weather which are telegraphed to the papers, and to all coast stations, are made up. The delicate adjustment of the thermometer and barometer, and the ingenious mechanical devices that are used, could not be understood by our readers without the requisite drawings. The two instruments of most importance are of course the thermometer and barometer. The former is known in its simplest form to every household. Of the latter, as it is the one most often mentioned in the reports, it may be necessary to say a few words. A barometer is defined by Webster to be "an instrument for measuring the weight or pressure of the atmosphere. It consists of a glass tube, hermetically sealed at one end, filled with quicksilver, freed from air, and inverted in a basin of quicksilver. Its uses are to indicate changes of the weather, and to determine altitudes by the rising or falling of the mercury." When the lowest or highest pressure of the barometer is spoken of in the daily reports of the Signal Bureau, the meaning is that the weight of the atmosphere has varied over certain areas, and a change is probable in the state of the weather. This, of itself, is no certain indication, however, for if the barometer be used as a weather glass, it must be remembered that no rule that can be given will always hold true. The rising of the mercury usually presages fair weather; and its falling foul, or rain, snow, high winds, and storm—the heaviest fall being found in great winds, though unaccompanied by rain. In very hot weather the falling of the mercury usually foreshows thunder. In winter the rising presages frost. In frosty weather a continued fall foretells a thaw; and in a continued frost a rise indicates the approach of snow. If a change of weather follows very close upon a change in the barometer, it may not be expected to last but a short time, and *vice versa;* and where the action of the mercury is unsettled, changeable weather may be anticipated.

The districts covered by the names used in the daily reports, include different sections of the United States are quoted by Maury as follows:

Maine, New Hampshire, Vermont, Massachusetts, Connecticut and Rhode Island, are alluded to as the New England States, or the Northeast, or simply as the Eastern States.

New York, New Jersey, Pennsylvania, Maryland, District of Columbia and Virginia, as the Middle States, or sometimes as the Middle Atlantic States.

North Carolina, South Carolina, Georgia and Northern and Eastern Florida, as the South Atlantic States.

Western Florida, Alabama, Mississippi, Louisiana and Texas, as the Gulf States.

Sometimes the Gulf States, the South Atlantic, Virginia, Tennessee, Kentucky, and Arkansas, are grouped together as the Southern States.

The Lower or Eastern Lakes, when used, means Lakes Erie and Ontario.

The Upper or Western Lakes are Lakes Superior, Huron and Michigan.

The Northwest, popularly, means the country lying between the Mississippi and Missouri rivers.

The Southwest means Texas, Indian Territory and New Mexico.

Pacific Coast or Pacific States includes California, Oregon and Washington Territory.

The Ohio Valley includes the belt of country about two hundred miles broad, between Pittsburg and Cairo.

The Mississippi Valley includes a belt of a little greater width from below Vicksburg to Davenport, Iowa.

The "extensions" from one State to another refer to areas reaching to the central portions of the State mentioned.

In "Coast" is included the land between the water edge and the coast hills or mountains which skirt them.

Winds are said to blow from northeast when they are included with the quadrant from north to east, and similarly for other directions.

Muck on Sandy Soils.—In some portions of the Southern States, where they are slow in adopting new methods of culture or hints leading to experiments, they are beginning to find out that muck hauled upon sandy soils tends to increase their productiveness. This is no new thing. We recommended it, as did correspondents, five-and-twenty years ago, and pointed out instances that had been attended with marked success. Even pure clay hauled upon light sandy soils, and intermingled, has been followed by excellent results, the land increasing its crops fully fifty per cent. Where clay or muck is as convenient of transportation as manure, there is no question but its application as here suggested would prove of the most decided advantage. Even in gardens, when the soil has become exhausted by long-continued cultivation, a dressing of clay is far better than a coat of the best manure.—*Germantown Telegraph.*

THE INTERNATIONAL SOCIETY, AND OUR AGRICULTURAL POPULATION, LAND OWNERS AND OTHERS.

The International Society, which dates its origin from the World's Fair in London in 1863, has since spread throughout the different countries in Europe, until it is said to number a million of members. It is now attempting to found Branch Societies in various cities of the United States. If it succeeds in doing this, and especially if it succeeds in building up a political party, whether as a Labor Reform party, or in any other disguise, its effect not only upon capital and all sorts of property, not only in cities, but also upon property in land, farms, plantations, &c., might ultimately become very serious. It, therefore, is the duty of this journal to offer a few words of warning.

The sound common sense and conservative feeling of our agricultural population must constitute our main bulwark against the pernicious projects of these political agitators and destructive agrarians, although their influence is not likely to spread rapidly through the country, because of our immense extent of territory, and the easy acquisition of landed property, there is always danger in such schemes among the looser population of our large cities.—But whilst our rural communities remain unaffected by anarchical ideas, we may safely bid defiance to the men who seek not only the overthrow of property, but of religion also. This the International Society certainly does at the present time, and as Mr. Hoar, of the House of Representatives, at Washington, has thought proper recently to praise the Internationals and their works, and in this connection has introduced a resolution calling for the appointment by Congress of a committee to enquire into the condition of our laboring population, we propose to give our readers, briefly, the history and declared object of the International Society.

The origin of this Society dates from the year 1862—when a number of workmen from various parts of Europe visited the great exhibition—at that time an address was delivered to the French workmen by their English brethren, in which the first germs of the International Association are found. An active correspondence subsequently ensued between the workmen of the different countries, and in 1864 an organization was effected in London by delegates exclusively from France and England.—A declaration of principles was issued, and arrangements made for holding a General Congress at Brussels, in Belgium, in 1865. This meeting was afterwards postponed until 1866, when the Congress met at Geneva, in Switzerland. The topics then then discussed were "Working Class Associations, Strikes, Popular Education, the Labors of Women and Children, the Hours of Labor, the Relations of Labor and Capital, Taxation, Currency, Weights and Measures, Standing Armies, Religious Ideas, and Beneficial Societies"

At this Congress the domination of labor by capital was denounced, and the question of "reorganising Society" first started. Another Congress was held at Lausanne, in Switzerland, in 1867, when radical ideas were still more strongly ventilated.

But it was not until 1868, at the Congress at Brussels, that the full extent to which the Internationals were prepared to make war upon Society was openly and authoritatively avowed. It was resolved in that Congress, by a vote of thirty-four to four, that "all Machinery ought, of right, to be the property of the workingman, as well as all Quarries, Coal and other Mines, also, *all tillable land*, Railroads, Canals, and Highways."

All these it was asserted should first be taken by the Government and thrown together, and afterwards distributed among associations or companies of workingmen, who, it was said, would then go on and work them "on national and scientific principles."

We have no space to notice the Congress held at Basle, in 1869, further than to say that the schemes there promulgated were, if anything, still wilder and more revolutionary. The Congress of 1870 was to have been held at Paris. The war with Prussia effectually interfered with the proposed meeting, but the chiefs of the International Society from their headquarters in London supplied leaders to the sanguinary Communists, endorsed their worst excesses, and thus became parties to all the atrocities that, beginning with the assassination of two generals of the army, was followed by the assassination of the Archbishop of Paris, and sixty priests and citizens, and ended in fire and blood.—Such is the record of this Society. It is made up of fanatics, malcontents, and knaves, and ruffians of all sorts. Its purposes are the total abrogation of all descriptions of property—all property to be thrown into a common stock—and a forcible suppression of all religious sects and observances. At present the Society does not number many members in this country; there being very few outside the city of New York. But its emissaries are constantly at work, and it is well that our farmers and planters and our country population generally, should know something of its character and aims. Hence this article. "Forewarned is forearmed."

Bird Manure.—The manure of birds is richer than that of animals; as the solid and liquid excrements are mixed together, it is particularly rich in nitrogen and the phosphates. Three or four hundred weight of the manure of pigeons, fowls, turkeys, etc., is of equal value with from fourteen to eighteen loads of animal manure.

CAUSES OF CROP-FAILURES.

A writer in the Nashville *Union and American*, who is strongly endorsed by that Journal as a "gentleman of elegant accomplishments, discriminating judgment and sound common sense," assigns four principal reasons why Southern crops have for the past few years been failures. The first is that too large a surface is taken in hand. The writer says the true way is to take but half the quantity and begin by thoroughly preparing, enriching and generally breaking and sub soiling the Fall before the seed are to be sown. The second is *late planting*. He thinks that the corn crop of this whole section of country was reduced fully one third by inattention last Spring. The third is, that our farming implements are generally behind the age. The writer says:

"Our plows go in the furrows rusty, dull and misshapen. They are often drawn lazily along by an animal which ought never to be accepted as a gift by a sensible farmer. It were the height of folly for a mechanic to economize on the first cost of his tools by picking up at half price a rusty saw here, a dull jack-plane there and a broken chisel yonder; and equally so for a farmer to put up with poor tools or poor stock. Better have two good strong horses than four poor, weak ones."

The fourth is *poor seed*. The writer says on this point:

"If it pays—and it surely does—to invest thousands in animals for breeding purposes, will it not pay as well to get good seed? Buy at home, if possible, abroad if necessary. Tricky advertisers and dealers are of course constantly before the people trying to get large prices for worthless seed, and we should use, therefore, the more care to get a genuine article. It will never do to fall behind in this important item.

My remarks, then, might be summed up thus: Deal in the *best* only, prepare and cultivate the soil *thoroughly*, and we will be apt next Thanksgiving Day to thank the Lord for about twice our usual harvests."

Applying Lime to Land.—If applied to wheat ground, after it is plowed, it makes a decided improvement in the crop. And if clover is sown with the crop, the clover will be thicker where the lime is applied. Now, if the clover is plowed under in the spring, and corn planted, there will be enough larger crop of corn to pay for the hauling of the lime, and for the clover seed used, besides. Ashes are very good for wheat, also.

Commissioner Delano, of New York, has decided that a farmer selling his produce from his own wagon, without any regular business stand, is not liable to pay a tax as a produce dealer.

A Manure to Kill Weeds.

A correspondent in Bucks county asks whether we know of any manure that will kill weeds? We answer that we do not. Salt, which is a fertilizer, will kill weeds most effectually, but it will kill everything else except asparagus and one or two other vegetables. There is a number of chemicals that will destroy vegetation, but there is nothing that we know of, and we presume that anybody knows of, that will *pick out* noxious weeds only. When the Canada thistle appears the best thing is to dig them out, sprinkle salt liberally about the excavated parts. And when they have taken a big start with a determination to go ahead, mow them off before a rain, cover the stumps with salt, and if anything will give them their quietus that will.

What a splendid discovery, however, it would be to get a first-rate manure, cheap as dirt, which would make everything grow that the farmer wanted to grow after the most luxuriant fashion, and at the same time to ferret out and destroy every weed and all unwelcome vegetation! Can none of our great fruit-inventors give us something to this effect? There talents are so varied and miraculous that this ought to be only a fly-bite for them.—*Germantown Telegraph.*

Are Moles a Pest?

There is a great difference of opinion as to this question. Our own is that the mole is harmless as a rule—sometimes it damages lawns and gardens in pursuit of its food, which usually is the earthworm. If it should go through a hill of corn and injure it by loosening the rootlets, it is still in pursuit of the earthworm, which is, in dry times, found about the roots of corn and other vegetables, grass, &c., more abundantly than elsewhere. So far as our observations extend, we have never known the mole to eat vegetable matter. It would seem to be, strickly, a carniverous animal. And on this head here is something to the point: Mr. Weber, one of the *savans* of Zurich, Switzerland, recently examined the stomachs of a number of moles caught in different localities, but failed to discover therein the slightest vestage of plants or roots; whereas they were filled by the remains of earthworms. He shut up several of these animals in a box containing earth and sod with growing grass, and a small case of grub or earthworms. In nine days two moles devoured 341 white worms, 193 earthworms, 25 caterpillars, and a dead mouse. Fed with a mixed diet of raw meat and vegetables, the moles ate the meat and left the plants; and when vegetables exclusively were dealt out to them, in twenty-four hours both died of starvation.—*Germantown Telegraph.*

For the Maryland Farmer.

JAKOBB DUNK PAPERS
ON
FACTS, FILOSOPHY AND FARMIN.

PAPER NUMBER V.

ON ROADS.
The Mode of Repair.

We have had our troubles about roads like all other people, and have been searching for the cause of our troubles but it appears difficult to find: the simple remedy for *road distemper* appears thus far to lie at the bottom of the well.

Several yeare ago the people of Purland decided that at last the time had come when they would no longer tolerate bad roads: "that they were a dis-"grace to civilization, and unworthy a people who "were determined to gather around them all the "products of the highest refinements; that bad "roads belonged to an age of rudeness which had "been succeeded by the achievements of inventive "art and no sufficient reason existed for not intro-"ducing into the system of road repair, those im-"provements which had been adopted in all other "matters affecting the interest of farmers."

I call that sublime: now let us see what came of it.

A convention of the people was called to adopt a system for the more efficient repair of the public highways, and met at the Landing.

The system adopted was substantially as follows:

1. Every able bodied male person over 18 years of age, was to work one day on the public highway, pay $1.50 or go to jail.

2. In addition to one days labor, tax payers were expected to pay in money such amounts as would be necessary to secure the effective repair of the highways.

There are two prominent systems in operation in the United States, for the repair of the public highways; one is the money-tax, tho other the labor-tax system.

The plan adopted by the convention was a step forward from the old inefficient money-tax system, but as it went only part of the distance and attempted to combine the features of both systems, it failed.

Some of the factory operatives refused to work on the roads: some of the farm hands refused to work: a case was made for the courts: then political agitation began to take place: (there were votes in the matter:) then the roads were left unworked pending the discussion: then the law was changed and we have got back to the same old system; like France, that periodically spends millions in treasure and blood for a republic, only to get back to an empire again.

If it has been difficult to find a proper *system*, it has been equally difficult to get the proper *mode* of repair back into the rural districts: this mode is well understood on the Macadamized thoroughfares, but it appears difficult to import it a few miles back into the country.

Why?

Not entirely discouraged by the results of past failures, a few of us were anxious to try again and endeavor to do something: for our roads still continued "a disgrace to civilization, standing alone unimproved in the midst of the progress exhibited in all other matters pertaining to the farmers' vocation."

We thought of trying another convention: it showed pluck if it lacked judgment. Perhaps we ought to have given it up; got stuck in the mud and waited for fair weather to make the roads dry and smooth again.

I met Mr. Dunk at the Codge one day. I go there sometimes for my mail—

"Good morning, Mr. Dunk," said I.

"Mornin' Joodge," was the reply, and he looked up on the door at the

NOTICE.
CALL FOR A CONVENTION.

All persons who think that we have had enough of bad roads and are determined to end them, are requested to meet at the Landing, on Thursday, January 20, to take some action towards removing the nuisance—and then he said

"More road botheration, hay?

"Yes," I said, "any people that will tolerate such roads are not fit to be at liberty. Two gentlemen drove up the mill road yesterday and one had to get out to keep their carriage from upsetting and those men are looking for land: another stranger met me on the road last week and made such a strong charge against the people and the roads, that I felt ashamed of myself, because he was right."

"Let 'em stay away then, ef they dont like 'em," said Jakobb, and I lost sight of him for a moment behind a huge puff of smoke from his pipe.

"Those who have land to sell don't say so," I replied.

"Let 'em keep it," said Jakobb.

"They will have to do so, for no one can get to it; but come," said I, "this inactivity will not do: we must do something or we shall be shut up so that we can't get out, and no one can get in. Get on your horse, Mr. Dunk, and let us drive down the road on the way home; I want to talk with you about the mode of repairing our roads, and about the proper system."

"No use, Joodge," said Jakobb, ye can't budge the thing: bad roads is *got* to be; its ben tried but no go."

"Well, let us keep on trying: let us find out where the trouble is and remove it."

Here we came to the cross roads. I have noticed that wherever one road crosses another or there is a turn or lane or entrance, some gross irregularity occurs to make it inconvenient for all who use the different places.

Such was the case in the spot before us.

"Mr. Dunk," said I, "isn't this a fine place for a load of hay to cross."

"Ought to be filled up with stones," said Jakobb.

"The main road should go straight on without interruption whatever," I remarked, "with its two gentle side trenches, and when a cross road occurs, those who use it can pass them easily: but in this place it is uneven for every body."

We began to ascend a gentle hill.

"This break is busted out," suddenly broke in Jakobb, "it ought to have more stones on it."

"It ought to have none at all, Mr. Dunk: the whole break ought to be 'busted' out entirely, and that other one also at the top of the hill."

"The water would dig a gully in the road a yard deep," said Jakobb.

"Keep the water out of the road by having the middle highest, and the two side trenches will take care of the water," I replied. Jakobb here turned around aghast! no breaks on a hill! It was contrary to all his practice and that of all his grandfathers.

"You bust them breaks out," said Jakobb, "and put the water on the sides, and it'll dig out two ditches as deep as a river bed, and leave the road high as a stack in the middle; and then where'll yer load be when yer wheel gits down one o' them wells?"

"Mr. Dunk," I replied, "all the water is turned on one side now by these breaks, is'nt it?"

Ya-a-s," answered Jakobb, "right where it ought to be."

"Now will you tell me how, by dividing the volume of water and putting half on the other side, it will make a deeper gully than when it all runs on one side?" I asked. It was two much for Jakobb's "filosophy;" but I could'nt convince him: he had got the notion somewhere, and a post-mortem autopsy will detect it, with all the other notions rolled up into a small wad at the back part of his brain.

Now the truth about breaks is this: they have a use under the present mode of repair in turning water from the road into an adjoining field to prevent too great a volume of water from running in the road, but the same object can be accomplished by culverts or water boxes without destroying the grade of the road, which is an important matter; we have hard enough work for our horses without increasing it by *making* obstructions.

Here we arrived at a flat which was passable by dodging around fence corners and picking the way, while right alongside of this truly miserable spot lay stones enough to Macadamize it.

"Wants stones, don't it, Mr. Dunk?" I asked, knowing Jakobb's invariable prescription for a poor spot.

"Ya-a-s, them thar stones ought to be chucked right into the road, to harden it," said Jakobb.

"The proper plan would be, Mr. Dunk, to find the lowest spot, build a strong deep culvert across the road; break up the stones fine and put them on, then apply a slight top-dressing of dirt from the side trenches. Water seeks the low spot, and so long as these are undrained no road can be kept good; drainage is one of the first essentials of a good road: it is as necessary to drain a road as a grain field, and yet country road makers seldom practice it."

Jakobb could'nt see the point: he thought if you "put stones enough thar it would fetch it."

Next we came to a mud hole in one of the wheel tracks.

"Yere ought to be stones any how," said Jakobb.

"Not an ounce," I replied: "the water remains in that spot because it can't get out: round up the road, throw the dirt in the depressions, and if the water can get off, there will be no mud holes."

The common plan of going to the stone pile for every ill that a road is heir to, is one of the most reprehensible features of country road making; it ought to be a penal offence to put a stone on a road that would not go through a two inch ring: (deep gullies excepted, but in these, it is not expected they will touch the wheel.)

Next we reached the branch.

"Here," I remarked, "we need a good bridge: this spot is a dangerous ford in high water."

"Joodge," broke in Jakobb, "I don't believe in no bridges."

"How would you have got to Baltimore the other day on the cars, if you had not gone over Potters Bridge?" I asked.

"Thems for cars: I mean for country roads."

"Could'nt we ride as pleasantly over a country bridge, as the cars go over an iron one?"

"Yes; but when a flood comes and washes 'em away, the channel is so deep the old ford is worse than it used to be," said Jakobb.

"Build them up again, the same as we do other good things when they give out: don't let us refuse to make anything for our comfort for fear it will wear out or break down or wash away.

"Where there is no bridge the wheels of vehicles make the road muddy for several yards on each side

of the water; this becomes very icy and dangerous in winter, and accidents are very likely to occur on such spots, besides the hard pull they give a loaded team to get up and over them, and who likes the scrape of a sleigh, in winter, through all the water and stones at the bottom?"

Next we came to three large depressions in the road—making as many big mud-holes at intervals of a few feet.

"What you going to do here without stones?" inquired Jakobb.

"These three depressions are the three lowest spots in the road, and repeated efforts have been made to prevent the operation of a natural law by throwing stones in these places, but water *will* settle in the lowest spot: in this case the side trenches should be graded towards *one* lowest spot, a culvert placed there and the water would naturally seek that outlet: then if the road is convex and graded no more trouble will be experienced here."

Did I make Jakobb believe all that? His medicine for a sick road was a stone pile, and he turned short around to me and said,

"Why, Joodge, they did'nt have none o' them queer ideas 'mong them old time people!"

"No," I said, "and we have always had good roads in consequence."

Jakobb "seen" the point, but he "did'nt have time to argur the pint and must be fur gitten on," and he got.

Make *him* believe anything that rests on sound reason for its acquaintance?

You might as well try to make a spring shoat believe that a lightning rod is a button hole.

A few words in conclusion, in addition to the above remarks on the mode of repairing country roads.

Water bars or breaks are occasionally necessary, but very few are needed, and these should be built by the hand of sound judgment at the proper places, and not put anywhere and everywhere at the suggestion of ignorance and stupidity. The chief obstacles in an ascent very often prove those which the hand of man has placed there: if it is feared that the straight sweep of the water down an uninterrupted hill side will dig out the trench too deeply, obstruct its passage by a large stone or other effective dam, and the slight additional trouble will be met by increased facilities for over coming the ascent.

Where the road is lowest in the middle, and the road bed and wheel rut are allowed to become the water courses, the result is frequently a deep ditch in the road: this is usually filled up with large unbroken stones, covered slightly with dirt which the next heavy rain removes, and then the large stones offer constant obstruction to pleasant travel: by making the water courses on the side of the road, and making the road convex to shed its water on the sides, this trenching out of the road bed will not occur: where it does, the gully should be filled with stones not nearer than within a foot of the surface; the remainder should be filled with small stones and dirt.

Where it is necessary for water to cross the road, it should do so *under* the road through a culvert built of stones or a water box of oak or chestnut plank, two inches and a half thick: the passage should be not less then two feet square to permit the easy removal of obstructions without taking it up.

A country road from fence to fence should be thirty-five feet wide; the worked road bed (the usually traveled portion) should be ten feet wide.

I have given no directions concerning the proper grade or arc of the convex road: we cannot adapt all the modes nor rules of scientific road making upon our rural highways: what we should aim at is the best condition of those highways possible under the circumstances; and when we see the high condition of some private roads in the rural districts, we must be satisfied that condition is attainable upon the public routs. I know several private roads immediately around me that are models of good road making, and the adoption of the same rules would secure the same excellence on the country thoroughfares.

Having exhausted my space upon the *mode* of repairing country roads, I will venture a few ideas next month on the *system* concerning which I am certain Jakobb and I will have a battle.

Rule for Weighing Hogs.—The Kantucky rule for estimating the net weight of hogs is said to be, for the first 100 lbs., ceduct 25 for gross; for the second 100 lb., deduct 11½; for the third 100 lbs., deduct 6¼; all over the third hundred is net. The net weight of a hog weighidg 100 lbs. gross is 75 lbs.; a hog of a 150 gross will net 118¾; of 250 gross, 209¾ net, and a hog, the gross weight of which is 300 pounds, will net 256¼ pounds. From the gross weight of a hog that goes over 300, 43¼ pounds only is deducted, even should the weight be 400. This rule, if correctly stated, may be of use to somebody.

A Vow.—A wealthy young farmer in Ohio made a vow at the time of his marriage that he would plant forty peach or apple trees for each child born during the first ten years of his wedded life. He's been married ten years and has about 320 trees. He talks about retracting his vow. He hasn't the land to spare. But will consult his wife.

PROPER MANAGEMENT OF MANURE IN THE YARDS THROUGH WINTER.

In reading the discussions for the past twelve months at Farmers' clubs and agriculturel meetings, as to the value of artificial fertilizers, the use of lime, plaster, etc., and the best methods of keeping up and restoring the fertility of soils, we find a great variety of opinion. In respect, however, to the superior value of barnyard any stable manures, where they can be obteined or manufactured on the farm, all parties seem to be agreed. We have never seen any difference on this point.

There would also seem to be an entire agreement among experienced farmers, that manure made properly and kept under cover during the winter months, is worth, load for load, *at least* three times that which has laid in open yards, exposed to rains and snows. In this section of country, among our best farmers, there is usually enough shedding connected with barn buildings, to give protection to stock and to manure, but where this is not the case, we hold there is no more profitable investment than the erection of one or two cheap open sheds with plain board roof, in the middle of the barnyard. Under this the straw, refuse cornstalks, etc., should be spread at times, and they should be large enough for the cows to lie under without crowding. It would give them protection from cold and rain, affording at all times dry bedding. It cows are allowed free access to such sheds to walk over and lie upon, there will be no heating from manure accumulations, so often happening in manure cellars, where fire-fanging destroys its value.

The *proper management* and *proper application* of home-made manures, is probably among farmers the most important question of the times. We often see saving at the spigot and the largest kind of leak at the bung, as regards the manure heap. Wooden pillars, resting on stone, should support these open sheds, and the roofs could be readily so constructed as to raise up at the corners with wooden pins, (the old barrack fashion), as the accumulations under would increase. Plaster should be kept on hand for an occasional sprinkle under the sheds through the winter. This checks the escape of ammonia, and also assists in the decomposition of dry refuse matter. Under these sheds we would have the cleanings of the stables wheeled and spread every morning, and the mixture of the different manures varying in strength from that of horses and grain fed animals to that of the cow stables, where little or no grain may be used, would tend to improve the character of the mass. The farmer in the spring would have something to haul out, every load of which would tell. It would be of the highest efficiency and *uniform of quality*. The strength will not have been drained out of it, and passed off into the nearest ditch or run, because it will have been covered and protected from the weather; neither have we ever found manure so managed, fire-fanged or heated in the spring. Such sheds answer the double purpose of protection to manure and to cattle, and where there are only dark stables with low ceilings for cows to remain in during most of the twenty-four hours, it is probable they are quite as advantageous in one respect as in the other. We speak of them now, however, especially as the farmer's factory, where the work can be mostly done by boys, where the raw materials are collected out of which the crops and profits of the coming year are to be elaborated—corn, oats, wheat potatoes, hay and pasture, roots, fruits, vegetables, etc. —*Practical Farmer, Philadelphia.*

THE HORSE STABLE.

Prof. W. S. Clark, president of the Massachusetts Agricultural College, submitted some time since to the Board of Agriculture of that State a carefully prepared report on Horses, from which we extract the following:

A suitable stable is the first requisite in the care of a horse. Should be capacious, well-ventilated, but warm, well-lighted, and so situated as to be free from dampness. Stables are not unfrequently built over cellars or depressions in the soil, which receive the manure, and are often partially filled with water. The constant evaporation from this pond keeps the entire stables damp and chilly, and thus in an excellent condition, for causing founder, rheumatism, lung fever, colic, and other diseases in the poor, exhausted creatures, whose uncomfortable nights must be passed here. Warmer, but not more salubrious, are stables over cellars, dark and close, which are fumed with the pungent, noxious gases generated by fermenting dung. Such cellars ought always to be very thoroughly ventilated, not merely by an open door or space on one side, but by a constant and abundant circulation of air.

The stalls should be as wide as circumstances will allow, but never less than five feet, in order that the horse may have room to lie in an easy unconstrained position and rise without any danger of brusing the points of his hips.

Wherever it is feasible, a loose box-stall twelve or fourteen feet square is by far the most comfortable for the horse, and there should be at least one in every stable, for use in case of sickness or accident. The difference between such a resting place, into which the horse is turned loose, and a narrower stall, where his head is hitched up two feet from the door, as often happens, is much like that between a berth in the cabin of a steamboat and a nice double bed.

The floor upon which the horse stands should be as near level as possible, and if it must be inclined to carry off the water, it would probably be more agreeable to the horse to have his fore feet the lowest, as his back sinews are less tense in this position; and it is observed that for this reason horses in pasture usually stand with their fore feet in a hollow which they have excavated by stamping.

The English method of having a grate over a drain in the center of the stall, is an excellent one.

Another good plan is to lay a double floor, the one under one with an inclination of three inches, and the upper one of planks four inches thick at one end and one inch at the other, placed about one inch apart. In this way the standing-place is perfect, and the draining perfect.

Many horses have been seriously injured, besides being made uncomfortable, by being confined in narrow stalls upon inclined floors. In box-stalls, where the horse can move about and take the most agreeable position, it is of course not necessary that the floor be level, and perhaps better that it should not be.

The sides of the stalls should be smooth, and if the horse is disposed to rub his tail he may be prevented by fastening strips of plank six inches wide to the partition, about three feet from the floor. In a narrow stall there might be danger that the horse would injure his hips upon these planks, but he will soon learn to avoid them in rising.

The common form of rack and manger for ordinary stalls is on the whole not very objectionable. When the hay and straw are all cut, the rack is quite unnecessary, and if one be used, it would be much better to set it in a vertical position than inclined, as is usual. The horse would feed more easily and be less annoyed by dust. The edge of the manger should be protected by a strip of band iron, both that it may not be destroyed and that the horse be not tempted to acquire the vicious habit of cribbing.

The best mode of fastening a horse in a stall is the English one of attaching a light weight to the end of the halter and allowing it to run up and down under the manger, which should always be boarded in front from the floor up. By this arrangement, the horse enjoys sufficient liberty and yet has no chance of getting cast by stepping over s halter.

Gardening for Ladies.—Make your *beds* early in the morning instead of lying thereon; *sew* buttons on your husband's shirts; do not *rake up* any grievances; protect the young and tender *branches* of your family; *plant* a smile of good temper in your face, and carefully *root out* all angry feelings; *cultivate* all womanly graces, and expect a good *crop* of happiness.

EXPERIMENT IN CLOVER AND LUCERNE.

In compliance with your request, I send you an account of my experiments with clover, lucerne, and the grasses in the prairies of Mississippi.

I give my failures as well as successes; it is as important to know one as the other. In 1866 I sowed about 20 acres in clover, broke the land with two mules, brushed the land to level it; sowed about 20th of February. I got an irregular stand which was afterwards thinned out by a freeze, leaving it too thin. In 1868 I sowed two hundred acres in clover, commenced about 20th February, sowed the seed upon corn and cotton land which had not been plowed since the crop was laid by; run a brush over it to level the beds and cover the seed. I got the best stand I ever had. It grew well notwithstanding there was a seven weeks drouth, from middle of May to first part of July.

I did not pasture it till fall. The next summer I mowed about three-fourths of it and saved about one and a half tons per acre, it has continued to give about the same yield to the present, and it looks as well now as the second year. I believe clover may be kept as long as desirable in the prairies, if it is mowed regularly every year to keep down the weeds. This spring I sowed some three hundred acres about 1st of March. There were very heavy rains about that time, the ground was too wet to brush it and I lost about half I sowed; the rains washed the seed off and drifted them in piles. I got a tolerable stand on the remainder.

I will in future run two bull-tongue furrows on top of the corn and cotton beds, drag a harrow or brush across the beds and then sow the seed; the first rain will cover them. I like shallow plowing in the prairies better for clover, than breaking it with turning plow; in the latter case, it is so rough that half the seed will be covered too deep to come up.

Lucerne I regard next best to clover, and equally as well adapted to our climate and soil. I have about three acres which has been badly treated—was sowed in 1859, and if it was regularly mowed to keep down the weeds, would make an immense amount of feed.

Timothy grows finely in the prairies; that mixed with my clover grows about waist high every year. I sowed about 20 acres by itself last spring, succeeded in getting a good stand, and it has passed through a nine weeks drought this summer. I think the best time to sow is the latter part of October or first of November, as soon as the ground is wet enough to sustain the young plant. I lost about forty acres last year sowed in September; a shower of rain sprouted the seed, and there was not enough moisture to sustain it through the dry weather in

October. It ripens for hay about three weeks after clover, which allows me to save my oat crop in the interim.

Herds Grass or Red Top, grows well upon land too wet for Timothy, and makes an excellent hay; grows thicker and finer than Timothy.

Orchard grass grows well upon good land; may be sowed amongst trees in woods lots, by thinning out and plowing. Meadow Fescue, (Randall grass of Virginia) on good land makes the finest grazing grass I have found. I have several acres of it, now (4th of November) nearly knee high, and it looks as fresh as a Kentucky Blue grass pasture.

Bermuda, last though not least, is not appreciated. Planted upon any bottom land too wet to be cultivated, yields more grazing for the six warm months in the year than any other grass. It is a great pest in cultivated fields, but valuable where it can be controlled. It never travels up hill unless carried, it spreads very fast down stream. The easiest way to propagate it is, lay off rows about three feet apart with a bull-tongue plow, drop bunches of grass every step and cover entirely up, pressing the dirt back with the foot.

It can be exterminated by plowing shallow in freezing weather in winter, or dry hot weather in summer; it cannot be killed by covering with dirt.

Clover is the great renovator and subsoiler for the Prairies, it will increase the production of land from seventy-five to one hundred per cent. in three years; yielding a handsome crop of hay after the first year. Clover hay when properly cured is relished by all kinds of stock; hogs eat it with as much avidity as horses or cows. When not at work, horses will keep in good order on it through the winter without corn.

If what I have written shall awaken an interest in any one on the subject of grasses, I shall feel amply compensated for my trouble. If any are skeptical, I shall take pleasure in giving them an occular demonstration.—C. F. Sherrod *Columbus, Miss., in Southern Cultivator.*

The following rules for the care of sheep during winter, are put forth by the *Western Rural*:—"Keep sheep dry under foot with litter. This is even more important than roofing them. Never let them stand in mud or snow. Drop or take out the lowest bars as the sheep enter or leave a yard, thus saving broken limbs. Never frighten sheep if possible to avoid it. Separate all weak, or thin, or sick, from those strong, in the fall, and give them special care. If any sheep is hurt, catch it at once and rub it with something healing. If a limb is broken, bind it with splinters tightly, loosening as the limb swells."

GARDEN IRRIGATION.

Although irrigation as practised in most countries, not excepting those portions of our own—the dry regions of the West and Southwest—where artificial watering is essential to agriculture, is a very simple affair, there are exceptional conditions under which it must call for the exercise of no little practical skill and the aid of more or less ingenious mechanical appliances. These are more likely to be called for in orchards and gardens than elsewhere, and even in the Eastern and Middle States, where this means of insuring the luxuriant growth of vegetation is now unthought of, irrigation might be frequently adopted to profit and advantage, especially in nullifying the effects of drouth, which, in almost all localities, every few years seriously diminishes the use of hay and field crops.

For orchards, probably no better plan could be devised than that in common use in the Fruit Gardens of California, the Santa Clara Valley, where water, raised by windmills from artesian wells, flows through square pipes, made of inch boards, beside the rows of trees, to each of which it is allowed to flow from an orifice, opened at will, in the adjacent side of the pipe. But wherever practicable, the water from a stream or spring should be used instead of that from a well, and it should always be allowed to stand in an open reservoir until warmed to nearly the temperature of the atmosphere. For gardens there are two systems: one that of showering the water upon the ground through the nozzle of a hose attached to the conduit pipe; the other, that of arranging the pipes below the surface, and perforating them to permit the outflow of water to and uniformly through the soil. The former will be likely to cost the least, and to require less attention than the other to keep the pipes in order, but the quantity of water required for a given area will be greater as the evaporation will be more rapid. There will also be avoided the danger of "rusting" or "scalding," which is believed to result to many plants from the rapid dissipation of moisture from their surfaces by the intense heat of the sun. This system has of late met with favorable consideration from certain parties on the Pacific coast, whose attention was turned to it by the increased yield of a small space of ground moistened by the flow of water through that unusual irragating agency—a gopher hole. A garden in which were laid subterranean distributing-pipes formed of short lengths of earthen tubes, loosely covered at the joints by pieces of broken ware, is stated to have "grown most luxuriantly and produced abundantly." The idea certainly possesses merit, theoretically considered, and is worthy of being very extensively tested in practice. —*American Artisan.*

WHY DID CLOVER GROW WHERE BRUSH WAS BURNED?

A correspondent of the *New England Farmer* writes as follows:—

"Why does wood ashes cause clover to spring up where none has grown before? A few years ago I burned some brush that I had cut on the margin of the field. This brush I burned on a spot where nothing but spear grass had grown for a great many years. The next year there sprang up a splendid plot of clover where I burned the brush. Where did the seed come from? If it was in the ground, why did it not germinate before?"

The following is the editor's reply:—

"Are you prepared to defend the assertion made in your first question? Can you prove that clover had never grown on those spots where wood ashes caused it to spring up? If you can, you are able to do more than all the scientific men in the world have been able to do, and those who hold to the spontaneous production of plants will, we presume, be willing to pay you well for your trouble in settling in their favor a long disputed question.

The common opinion, we suppose to be, that clover, and other plants and trees that spring up under circumstances similar to the growth of your clover, come from seed in the ground, which is preserved there by some process of nature not well understood. From experiments that have been made, most kinds of seeds kept in the ordinary way lost vitality in from three to twelve years—a few kinds being found to grow after somewhat longer periods.

But most scientific men believe that seeds buried in the ground preserve their vitality for hundreds and even thousands of years.

Mr. Marsh, in his learned work entitled "Man and Nature," says the vitality of seeds "seems almost imperishable while they remain in the situation in which nature deposits them." He gives many instances in which one crop of plants had disappeared on a change of conditions, and another, of different nature, had promptly assumed its place, originating evidently from seeds pre-existing for ages in the soil.

In a book entitled "Sketches of Creation," by Prof. Winchell, of the University of Michigan, recently published, there is a chapter on the vitality of buried vegetable germs, which fully corroborates the views expressed by Mr. Marsh. The writer alludes to the facts that on removing a pine forest, hard wood often succeeds, and *vice versa*, that earth thrown out of wells sends up a ready crop of weeds, and, not unfrequently, of species previously unknown; that on breaking up a sod of grass land, after any number of years, a crop of annual weeds will immediately resume possession that a dressing of raw muck develops sorrel; and to a great many similar facts. He laso cites the fact, as an authenticated one, that some well diggers in a towm on the Penobscot river, in Maine, about forty miles from the sea, came, at the depth of about twenty feet, upon a stratum of sand. No such sand was to be found in the neighborhood and none like it was known nearer than the sea forty miles away. It was saved and piled up by itself and on the completion of the well it was spread about the spot on which it had been placed. As some peculiar plants soon showed themselves they were protected out of curiosity, and on growing up they were ascertained to be beach-plum trees, and actually bore the beach-plum, which had never been seen except immediately upon the seashore. Now, geologists and other scientific men suppose that the seeds from which these shrubs grew were deposited in this sand when that part of the State was the shore of the slowly receding sea; a period anterior perhaps to the creation of man.

Well known instances of the preservation of wood in water and swamps are cited as confirmatory of this theory of the long continued vitality of seeds. The piles that sustain the London Bridge are still comparatively sound, after having been driven five hundred years. Venice stands on piles that were driven in the seventh and eighth centuries—more than a thousand years ago. And in New Jersey are swamps filled with timber so valuable that it is "mined" for lumber. Prof. Cook, in his Geology of New Jersey, says, "the number of annual rings in the trunk of one of these buried trees, six feet in diameter, was one thousand and eighty; while beneath it was another trunk counting five hundred rings, which had evidently grown and fallen down before the huge log above it had commenced its growth. This carries us back much further into the past than human records reach, but it is by no means a solitary case. Buried trunks of trees are often found from twenty to sixty feet deep in the earth, in what the geologists call the glacial deposits. At Salem, Ohio, fifteen miles north of Dayton, a mass of drift wood is found from thirty-seven to forty-three feet beneath the surface of the ground, embedded in mud.

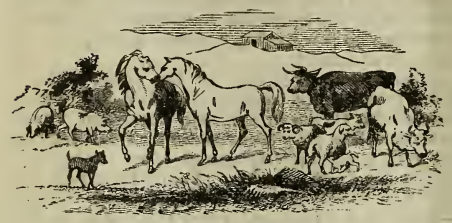
And up in Siberia the flesh of the extinct mammoth has been preserved in ice so completely that, on being exposed, dogs and bears greedily devoured it.

Prof. Winchell asks, if a material so perishable as muscular fibre could be preserved since an epoch which antedates authentic history, is it not more probable that the oily tissues of vegetable seeds could resist the tendency to decay under similar circumstances?

Now, in reply to your question, why the clover seed, if in the ground, did not germinate before you burned the brush, it may be said that possibly the hardy spear grass, having got possession of the soil held it with a conqueror's power, and thus made it impossible for the clover to raise its head. The destruction of this grass and of the tough sod it had formed by its innumerable roots, not only gave the poor over-powered clover a chance to germinate, but the ashes of its old oppressor, as well as that of the brush you burned, furnished the needed stimulus to rouse to life and action the dormant powers of the sleeping, but not dead, germ of the clover plant."

A Cotton Lord.—Col. B. G. Locket, residing near Atlanta, Ga., has this year in cotton 6,500 acres, and in corn and small grain 3,500, making in all 10,000 acres. At less than a bale to two acres, and at $60 per bale, the cotton crop would amount to 3,000 bales, and value to $180,000. Col. L. employs 360 hands—all blacks. The total population which he provides for is about one thousand persons. His cotton crop is fair—his corn crop is excellent. The negroes give him very little trouble, are orderly and tolerably industrious. Colonel Locket thinks, throwing out the value of the increase of slaves, and calculating the interest on the investment in slaves, that cotton can now be made rather more cheaply than formerly.

Live Stock Register.



SHEEP FOR THE SOUTH.

In rebuilding the prosperity of our Southern States there is no branch of industry calculated to contribute more certainly than sheep husbandry on a small scale. We do not wish to be understood as advocating sheep raising exclusively; but we do insist on this industry forming a link in that chain of diversified farming which is the basis of an independent and lasting prosperity. We have uniformly and energetically thrown the whole weight of our influence, since the war, against the almost exclusive cotton culture which has well nigh bankrupted our section; but we have never yet advised the abandonment of cotton. On the contrary, we have constantly urged the farmer to make it the main feature of his market crop, being careful to diversify his energies to the extent of making his farm self-sustaining. In this diversity sheep should have prominent place. No farmer throughout the cotton region should be without his flock of ten, twenty or fifty head, according to size and location of farm.

All experienced farmers will know that simply purchasing the flocks and driving them home, without further attention, will result in failure and loss. The effort will be profitable or not according to the care and intelligence bestowed upon it, and those who are not prepared or disposed to bestow these will best let it alone.

The intelligent farmer will first determine the number of sheep he is prepared to care for. If he has pasturage for twenty head only, he will not go beyond that number. This question settled, he will next direct his inquiries to the breed best adapted to his locality and the wants of his market. If he is so situated that the fleece forms the main item of profit, he will select that breed the wool of which is most valuable. If on the other hand, his market offers greater profits for mutton than wool, then he will select the breed most productive of mutton.—In either case economy will suggest that he buy the common native ewes of the country, which are cheap, and bring them up to the breed desired by carefully selecting and purchasing such bucks as will lead to the end in view. Those who have no experience will be astonished at the rapid progress the proper care will make in transforming a flock of common ewes into beautiful Merinos, or Cotswolds, or Southdowns, or whatever breed may be desired. Seven-eighths constitutes what is termed a "thorough-bred," and a little calculation will show how short a time is required to bring sheep to this point of purity.

Now as to the profits. The increase of sheep, with proper care, is safely estimated at seventy-five per cent. per annum. The fleece cannot be estimated with any degree of certainty, because of the great variation, dependent upon breed, pasturage, care, etc., while the price is equally unfixed. The farmer who gathers up his sheep but once a year, at shearing time, gets two to four pounds per head, for which he realizes from 18 to 30 cents, while the farmer who pastures and cares for his flocks, gets a yield of ten to eighteen pounds per head for which he realizes 30 to 75 cents per pound. In the first case, the profit, though trifling, is clear, and in the last it is subject to the charges of investment, pasturage, feed, care, etc. In the last instance, however, the flock is entitled to a credit for its fertilizing deposits on the farm, an item of the first importance to most sections of our country, and one that is not sufficiently appreciated. The profits in almost every instance larger are than those of most other branches of farm industry, and are not to be dispensed with by the skillful husbandman.

As to breeds, as we before remarked, the farmer must exercise his own judgment, considering his locality and the wants of his market. Our preference, generally, is for the Southdowns, believing they combine more good qualities than any other. They are of good size, very handy, produce an excellent quality of wool in large quantities, and as to the quality of mutton they cannot be surpassed. The Cotswold is a larger sheep, and yield a long, coarse wool in great quantity. They are also hardy in our Southern climate. The Merino is a sheep of good size, and produces a large quantity of very fine wool, which always commands a good price in the Northern markets; but there is not always a market for it here, and the sheep have proven delicate in most instances in the extreme South. In selecting breeds the farmer must "pay his money and take his choice," and he cannot make a very serious mistake in taking any one of the breeds named. We have heretofore published numerous articles on the care and treatment of sheep, and will continue to do so from time to time. Our present object is to direct the attention of farmers to the importance of engaging, to a limited extent, in this important branch of rural industry.—*Rural South-Land.*

CARE OF HORSES.

The London *Horse Book* says: All horses must not be fed in the same proportions, without regard to their ages, their constitutions, and their work; because the impropriety of such a practice is self-evident. Yet it is constantly done, and is the basis of diseases of every kind.

Never use bad hay on account of its cheapness, because there is no proper nourishment in it.

Damaged corn is exceedingly injurious, because it brings on inflammation of the bowels and skin diseases.

Chaff is better for old horses than hay, because they can chew and digest it better.

Mix chaff with corn or beans, and do not give the latter alone, because it makes the horse chew his food more and digest it better.

Hay or grass alone will not support a horse under hard work, because there is not sufficient nutritive body in either.

When a horse is worked hard its food should be chiefly oats—if not worked hard its food should be chiefly hay—because oats supply more nourishment and flesh-making material than any other kind of food; hay not so much.

For a saddle or coach horse, half a peck of sound oats, and eighteen pounds of good hay are sufficient. If the hay is not good, add a quarter of a peck more oats. A horse which works harder may have rather more of each; one that works little should have less.

Rack feeding is wasteful. The better plan is to feed with chopped hay, from a manger, because the food is not then thrown about, and is more easily chewed and digested.

Sprinkle the hay with water that has salt dissolved in it, because it is pleasing to the animal's taste, and more easily digested. A teaspoonful of salt in a bucket of water is sufficient.

Oats should be bruised for an old horse, but not for a young one, because the former, through age and defective teeth, cannot chew them properly; the young horse can do so, and they are thus properly mixed with saliva, and turned into wholesome nutriment.

Professor Agassiz stated a fact which breeders of animals should never forget or undervalue, when he said, "no offspring is simply the offspring of its father and mother. It is at the same time the offspring of grandfather and grandmother on both sides." Without touching ground at all debatable, he might have asserted this independence of offspring or liability to produce family characteristics extends much farther up the ancestral line. Hence the importance of thorough-breeding.

Feed and Treatment of Horses.

Hay and oats make the best feed for horses that are obliged to work hard and regularly. If the hay is cut fine, and the oats bruised or ground, the whole mixed and moistened, the horse will eat his rations quicker, digest them sooner, and thus have more time for resting and renewing his power for labor. Farmers' horses that work little during the winter time may be kept cheaper by cutting and mixing bright straw and hay in equal quantities, and adding a ration of steamed potatoes or raw carrots. Colts should be fed liberally on good hay—bright clover is best—and bruised oats; give them a roomy box stall in stormy weather and during nights. Litter freely, and do not let the manure accumulate under them. Sawdust or spent tan makes good and convenient bedding; in cities and villages they are often cheaper than straw.—Groom horses well, and let them have exercise every day; a run in the yard is excellent. See that stable floors over basements are sound and strong. Arrange the feeding racks so that dust and hay seed will not fall into the horses' manes or eyes; some horsemen build their mangers too high, thus forcing the animal to take an unnatural and painful position when eating. Farm horses that are not worked should have their shoes taken off, and those that are driven on the road should be kept well shod.—*Stock Journal.*

Selecting Calves for Milkers.—A writer in one of our exchanges says: The points that indicate the good cow are discernible in the calf, and why not? This may stagger some dairymen, but that is just what we wish to do. This wholesale slaughtering of calves in the spring is wrong. A calf will show a good milk-mirror, as well as a cow, and a rich cream-colored udder as well as a cow. And these points make up the cow every time. Let the breed be what it may, this is our experience in the matter. A calf that is worth ten or fifteen dollars should not be killed for its mere hide, for the lack of judgment in selecting.

Crosses of Sheep.—The Pontiac, Mich., *Gazette* says that Mr. Peck of that town, a breeder of fine wool sheep, bought a Leicester buck last year, and from fifty ewes got fifty-eight lambs, with no unusual trouble at weaning-time. They were dropped from the twenty-eighth of April, till about the middle of May. This fall, after taking out eight of the smallest, the average weight was a fraction over eighty pounds, worth (live weight) in Detroit, four and a quarter cents per pound. He is every way well satisfied with the trial, and will keep on. The mutton is far superior to fine wooled.

USEFUL RECIPES.

WORMS IN HORSES.—*Dadd's Modern Horse Doctor* says the chief remedies used for the expulsion of worms "are wood ashes, poplar bark, sulphur, salt, castor oil, turpentine, calomel, tartar emetic and aloes; either of which will sometimes bring away a quantity of worms. But the difficulty does not end here; the worms will generate so long as that morbid habit which gives rise to them exists. Hence the course invariably pursued by the author is to change the morbid habit by alteratives and vermifuges combined. The following is a good example of the same: —White mustard seed, whole; powdered mandrake; sulphur; powdered wormseed *(chenopodicum anthelminticum;)* and salt, ginger and charcoal—of each 2 oz.; poplar bark, 1 pound; mix. Dose, 1 oz., night and morning, in the food. Should the rectum abound in pin-worms, an injection of salt will be indicated."

GALLS AND SORES.—A correspondent of the *Rural World* writes: "I will give you an infallible remedy for galls and sores of all kinds on horses, including what is generally called scratches:—Two ounces extract of lead, two ounces spirits of wine, one oz. sal ammoniac, half oz. white vitriol, four oz. soft water; mix, dissolve and wash three or four times a day."

SALT AND ASHES FOR HORSES.—The *Turf, Field and Farm* says those keeping horses should twice a week throw in a handfull of salt and ashes. Horses relish this and it will keep their hair soft and fine. It will prevent bots, colic, etc. A little ground sulphur mixed with salt and ashes, and given once in two or three weeks is also beneficial. All domestic animals will be thus benefited.

SWELLED LEGS IN HORSES.—A correspondent in the *Rural New-Yorker* says, swelled legs in horses can be cured with a poultice made of boiled turnips and bound round the legs, to be renewed morning and evening, and continued one week.

COUGH IN HORSES.—Tar water sprinkled over their fodder and mixed with their grain, it is said, will cure the cough in horses.

PALPITATION OF THE HEART.—When a horse has palpitation of the heart it is an indication that he is not in good condition. I have known a horse affected in this way to fall repeatedly while being driven along the road, and I have always found that horses affected with it were in poor condition. When your horse has an attack, give him two or three ounces of acetate of ammonia in a quart of cold water as a draught, and a more liberal system of feeding may prevent him having any farther attacks of it.

STOP HIS KICKING.—Take a forked stick, about two feet long, varying a little, according to the size of the horse; tie the ends of the fork firmly to each end of the bridle bit, and the other end of the stick to the lower end of the collar, so as to keep the head up, and this will prevent his kicking. A few days working in this manner will commonly effect a cure. Horses are more apt to kick when turning in ploughing, or harrowing, than when doing any other work.

WARTS ON CATTLE.—Warts may be cured by washing in a strong solution of sal soda not once or twice, but it must be applied daily, for two, three or four weeks, and in fact, a cure depends entirely upon thorough and continuous applications.

We adopt a more speedy and effectual remedy. Mix equal quantities of spirits of turpentine and sulphuric acid, stirring slowly in a tumbler, afterwards bottle the ingredients. Rub grease around the base of the wart, and then apply the medicine to the wart with a feather once or twice a day; it will gradually eat it off.—*American Stock Journal.*

SCIENTIFIC.

Recent Progress in Chemistry.

I wonder what Sir Humphry Davy would have said to any one who talked about stellar chemistry. That great man, in ridiculing the idea of lighting London with gas, triumphantly asked the fanatics who proposed such a wild scheme, whether the dome of St. Paul's was to be the gasometer? Yet we cannot imagine Regent street illuminated, or rather darkened, with dips again, and to us stellar chemistry has a real meaning. Who will venture to bound a science which reaches far away through space, and with unerring accuracy tells us the composition of distant worlds and distant suns? What can be more humiliating to our small intelligences than the reflection that a distant star will photograph its spectrum on a sensitive surface with the ray of light that left it when the oldest man in this room was a boy? What would the great father of British chemistry have said, had he stood in the lecture room of the Royal Institution, where his great discoveries were made, and seen the burning hydrogen extracted by our great countryman Graham, from a meteorite, the heat and light of another world: or could he look with Lockyer on the burning flames of hydrogen, which darts up from the sun to a hight of 50,000 miles, or could he read the flashing telegrams which run so rapidly round our world, that all our notions of time are completely upset, and we actually receive intelligence to-day which was sent tomorrow? (Excuse the apparent absurdity; it only shows how powerless language is to keep up with human progress). Had he lived with us, he would have seen a large city dependent entirely for its communication with the outer world by a marvellous kind of photography, so minute that it enabled a pigeon to carry a proof sheet of the *Times* under its wing.—E. C. C. STANFORD.

New Preservatives For Timber.

According to the recent researches of Armand Muller, phosphate of baryta is one of the best salts for the preservation of wood from decay of any hitherto recommended. The wood to be prepared is soaked for several days in a solution containing 7 per cent. of phosphate of soda, and is then air dried; it is subsequently treated with a 13 per cent. solution of chloride of barium, and left to soak for seven days.

It is believed that by a mutual interchange of elements, within the texture of the wood, phosphate of baryta and chloride of sodium are produced, both of which possess remarkable antiseptic properties. The cost of the materials may stand in the way of their application on a large scale, but for some purposes they may be found to be of peculiar value. Soda-soap and sulphate of copper have also been highly recommended for their antiseptic and preservative properties, especially against the attacks of boring insects. Favorable reports are also made of experiments on mixtures of soap and chloralum; on sulphate of iron and soluble glass; on chloride of zinc; sulphate of copper alone, and corrosive sublimate alone.—*Journal of Applied Chemistry.*

THE mind, as well as the body, needs its gymnasium. Each faculty should be developed to its appropriate power, and the whole moulded into symmetry.

TRUTHFULNESS is a corner stone in character; and if it be not firmly laid in youth, there will always be a weak spot in the character.

For the Maryland Farmer.

BUCKWHEAT CULTURE.

Your contributor, J. F. Wolfinger, in the Jan. No. of the *Maryland Farmer*, seems to find buckwheat a somewhat precarious crop, and seeks light on the best time of sowing, etc. That buckwheat has its peculiar requirements as well as all other grains, or plants, is not to be denied, but that it is any more of a precarious crop than oats, or any of the other grains, we do not find to be a fact, when the usual requisites are heeded, at least such is the general fact in Connecticut where our experience is confined with the crop.

The rule, so far as we are aware in New England, as the time for sowing buckwheat, is when the chestnut—American chestnut—trees are in blossom; usually from the 1st to the 10th of July. The reason for not sowing earlier is, that if the hot weather occurs when in blossom it does not fructify, but blasts. Cool weather, or at least cool nights, are an essential, when the blossoms appear, for good seeding; the aim then is to defer sowing to as late as safe and yet give sufficient time to mature before frost, as a light frost injures the crop, as stated by Mr. W.; and with us we have by experience found that if we sow at the time of blossom of the chesnut trees we give the requisite time for maturing a good crop—but all general rules have their exceptions, a partial failure does sometimes occur from untimely frosts, or some peculiarity of location—so do oats occasionally partially fail from some cause, as well as other grains and crops, when we suppose we have complied with all the necessary requisites.

Sometimes as much depends upon the preparation of the soil, as upon the exact date of seeding, for with a mellow well prepared soil the seed will germinate and grow to get ahead of that on less well prepared soil if sowed ten days later than the latter. Every cultivator should exercise judgment in the selection and preparation of his soil for this, as all other, crops. When the soil is heavy and only plowed but once, it is often dry and breaks up in lumps and clods, or if rain is waited for the ground cannot be reasonably prepared for sowing. In such a case it is always advisable to plow the ground in spring, so that it may not become dry and hard for a second plowing at the proper time of seeding.

GIARDINIERE.

In treating a sick animal, where there are no doubts in regard to the complaint, it is advisable to commence with mild treatment. When no reliable advice is to be had, simple remedies are the safest—hand rubbing, light blanketing and securing against cold or a draft of wind.

FARMERS' CLUBS.

Farmers should follow the example of merchants, mechanics, manufactures, as well as other classes of our industrial population, and combine for self-protection, because combination gives them strength, and when thus united they can learn of each other very many valuable things that without organization would be lost to each other, and the world. A contemporary speaking on this subject says:—"Let us farmers, quit some of the old hackneyed paths, and avail ourselves of the examples offered by the shrewd, money-making classes about us, and thus gain strength by union, protect our interests by a better knowledge of them, and gain ability to state and defend them, and learn of each other how to secure the best products in our art at the least cost."

The advantages of Farmers' Clubs have been so thoroughly discussed by the press that it is needless at this time to go into details, we therefore submit the following form for the organization of a Farmer's Club:—

ARTICLE 1. This Association shall be styled the

ART. 2. Its object shall be to promote the interests of agriculture, and the welfare of the farmer, to disseminate such knowledge, practical and scientific, as shall conduce to that end.

ART. 3. Its officers shall be a President, Vice-President, Secretary, and Treasurer, who shall be chosen annually by ballot.

ART. 4. The president shall preside at all meetings of the Club, with power to preserve order and appoint speakers and committees.

ART. 5. In the absence of the president all his power may be exercised by the vice-president.

ART. 6. The secretary shall keep a record of the proceedings of each meeting, which shall be read by him at the opening of the next meeting. He shall preserve all essays read by members, reports of Committees, and conduct whatever correspondence is directed by the Club.

ART. 7. The treasurer shall keep a correct account of all moneys received, shall disburse the same as directed by the Club, and at each annual meeting present a clear and correct statement of the same.

ART. 8. There shall be at each meeting a discussion upon a topic previously announced; a number being appointed to read an essay upon it, and two other numbers to commence the discussion as leaders.

ART. 9. New members may be elected at any regular meeting of the Club by signing the constitution and paying the sum of———

ART. 10. The annual meeting of the Club shall be holden on———of each year, for the election of officers; and all officers so elected shall hold their office one year or until a new election is made.

JAMES VICK has, we learn from a Rochester paper, been elected a corresponding member of the Royal Horticultural Society of England. This honor is worthily bestowed and will prove neither a discredit nor disadvantage to the Society conferring it.

MUCK---ITS TREATMENT AND USE.

There is much muck in the country, and as it is manure (vegetable matter,) its importance will at once be seen: it is a main reliance of the farmers. But it is in such a condition, wet, sour, that it is not immediately available. It must be manipulated, changed, just as all raw manure must be treated. How is this? By exposing it to the atmosphere, depriving it of its water, and letting in the air. Then it is good vegetable manure. If the land has already sufficient of this, muck must not be used. This is the case when straw-manure and green crops are mixed with the soil. Some land, by being highly manured, has this in abundance. In such case, it need not be said, muck should not be applied. But where this is wanting, which is generally the case, the swamp deposit comes in properly; its benefit, then, is considerable and immediate providing it has been rotted, or treated as above mentioned. If not thus treated, but hauled direct from its bed to the field, its effect will still be the same if that field is treated to a fallow, providing always the carbonaceous element is wanting. Thus we have seen the finest effect in carting wet muck upon the land and mixing it well with the soil, plowing and working the land successively during the summer, the heat and the soil acting upon it, making a fine, mellow and rich condition of the land. This upon clay, with considerable sand and gravel. The crop (of wheat) proved an excellent one; before, the land yielded but little. Several crops were taken with success, but that was the end of it. With more muck applied there would no doubt have been larger and more good crops, just as with barnyard manure. This, then, is the secret with muck in general. But it also has other uses. These, however, are less paying, as they require more labor, and substitutes may more cheaply be obtained. We, of course, refer here to muck as an absorbent. To dry it, cart, and recart on the field, may pay, but it is doubtful, depending somewhat on its accessibility. Much cheaper and equally effectual, is chaff or cut straw, or even saw-dust.

As a top-dressing for meadows, muck in general is good, having been prepared previously. It will get down to the soil readily, and lose none of its strength. It may be used in preference to manure proper (from the stables) on pastures. This on sandy or clay soils is advisable, as it will not foul the feed as manure from the barn will. Its appropriateness here will at once be seen.

For potatoes it is also excellent, particularly when used in connection with ashes, the latter put in the hill. Indeed it is hard to say what crop is not benefited by it. Particularly is it suitable to clay soils to give mechanical amelioration, making the land and the muck a compost. The toughest and most obdurate clay can thus, with the aid of the elements, be reduced and made a most desirable soil. But it wants the winter with its frosts and rains and snows, and the summer with its heat and its showers, aided by mechanical means, to reduce it. Then the land is not only improved, but is nearly all improvement; and muck can not be put to any better use than this—we will say all kinds of muck, some more valuable than others. It will thus be seen how we neglect our advantage by leaving our muck where it is—where it is a damage, a harbor for reptiles, breeding miasma, a trap for cattle, and an eye-sore. To remove it is to clear all this, and to benefit exceedingly the land that needs it, making land, good tillable soil of the spot that held it.—*Utica Herald.*

HOGS---HEAVY WEIGHT'S.

A correspondent writing from Millington to the *Kent News*, Maryland, under date of December 6th, thus speaks of "some" hogs slaughtered in Kent County:

"I noticed a local giving the weight of 12 hogs, killed by Mr. S. Vannort, in Worton, which averaged 292 lbs., and ask who can beat it? You will permit me to answer by the following statement of the weight of 28 hogs butchered in this town on Monday last, as follows:

4	hogs by	S. L. Blackiston, wgt.	1,677
4	" "	C. P. Lopher, "	1.493
6	" "	J. W. Jarman, "	1,777½
2	" "	John Blackiston, "	773
1	" "	J. Johnson, "	438
1	" "	C. Bradley, "	382
2	" "	J. Edwards, "	637
2	" "	H. Redding, "	418½
2	" "	Mr. Watson, "	472
1	" "	S. W. Cole, "	237½
1	" "	Mrs. Boyer, "	244
1	" "	T. J. McWhorton, "	213
1	" "	J. Carney, "	247½
		Total	9.012
		Average weight	321

The above beats Mr. V. about 30 lbs. on the average. * * * But we can beat Mr. V. with a pen of 12 hogs butchered on the farm of Benjamin Hazell, dec'd, yesterday, which weighed 3,895 lbs., average a fraction over 324½ pounds. If any one can beat the above let them speak?"

A Locust Grove correspondent informs the *News* that Mr. W. O. Shallcross killed a pen of seventeen hogs on Saturday last, averaging 340 lbs. This beats both Millington and Worton.

A farm, with shade and fruit trees set around the house, will sell for two hundred to one thousand dollars more than if there were none; while the girls will have more beaux, and the boys be less likely to get the mitten.

Farmers' daughters who are handsome are the best kind of agricultural *fairs*—for their sweethearts.

BONE AS A FERTILIZER FOR WHEAT.

T. Saunders, Esq., of Essex county, Virginia, writes us that he made an application of two tons of *bone* to 12 bushels sowing of wheat, and that it increased the yield about 26 per cent.

It is proper, however, to state that his mode of conducting the experiment was by no means reliable. It was to weigh the swarths of grain of the same weight, thus weighing grain and straw together. The crop from a given area of land on which there was no application, and an equal area on which a known quality of bone had been applied, weighing both grain and straw carefully would have indicated the effect of the application, but a careful comparison of the effect of an application of different quantities of the bone would have been more useful, as a smaller quantity than that applied might have given equal effect.

The experiment would also have been much more profitable to producers in persuit of data on the subject, had he told us the character of the bone applied.

As a rule, the finer the bone is pulverized, the more marked and more immediate will be its effects.

The farmer can well afford to pay the cost of grinding bone to a fine meal, or flour. If thus ground, and it is incorporated with the surface soil by the use of the harrow, greater benefit will be derived from it by the first crop, than by drilling in the bone with the wheat, and that portion of it not fully utilized by the wheat will be in better condition to act as food for the succeeding grass crop.

Mr. S. states that he harrowed in the bone, we infer, with the wheat, and the effecton the timothy was to produce "a very rampant growth."

We feel that we cannot too strongly recommend the formation of farmers' clubs, as they have been, and cannot fail to continue to be most efficient means of disseminating knowledge. If all participate in the discussion of the topics considered, each may return to his farm with a store of the best ideas and experiences of all, hence general improvement of all cannot but be the result. This is the proper season in which to organize such clubs, and the meetings may be weekly, and even semi-weekly during the winter, and less frequent when the season of more pressing work arrives. The same principle applies to discussions by farmers' clubs as to agricultural journalism—the work of each successive month should be immediately preceded by discussion and intelligent consideration.

The effect of such a course will tend to greater system, more intelligent practice, and more profitable results.

Gentlemen of large experience in participating in farmers' club discussions, inform us that the efforts at too much formality, and too strict adherence to parliamentary usage, act as a barrier to success. Many farmers accustomed to public speaking, sit and talk with great freedom, and with interest and instruction to their hearers, and utterly fail when they rise to speak. The habit of speaking to an audience will be gradually acquired, and many whose confusion was so great that they could not impart what they well know, at first, soon become interesting speakers.

The farmers' club meeting is the best school in which to educate the tiller of the soil, and qualify him to represent the agricultural interest in Legislative Assemblies, for the want of his presence in which, his interest, and the paramount interest of this country has always suffered materially, and will continue to so long as legislative assemblies are mainly made up of political demagogues.

Farmers look to this, and personally defend and maintain your rights.

You have it in your power so to do, and you deserve to suffer if you neglect your known duty.

Corn and Cob Meal.

A Maine farmer, Stephen Adams, writing to the *Germantown Telegraph* on this subject says:—

As to cob-meal, most of the farmers in this town and vicinity grind a large proportion of their corn in ear, that is cob and corn together, and call it *cob-meal*. They think this is the best way. I have used this kind of meal for my horses for thirty years, and more recently for my other stock. I drove one mare ten years nearly every day and always fed on cob-meal when I had it; but some time in every year my cob-meal would give out and then I used clear corn-meal, and uniformly "Morgan" would soon begin to show by her looks and actions that she was not treated as well as usual. The members of my family noticed it and so did some of my neighbors. I suppose there is not a great amount of nutriment in cobs, though there is some; but it is a good condiment, and it keeps the meal light in the stomach so the gastric juice can more easily permeate the mass and digest it more easily. I think it is not so well to use food in the most concentrated form for man or beast. Feeding your horse occasionally with coarse, rough odder, will do him good and will prevent, in a measure, his gnawing his crib. Wheat-meal is undoubtedly better for bread than flour."

THE *Ohio Farmer* thinks it important to feed some straw every winter, as it seems to have a beneficial effect on most animals; it also thinks horses not at hard work do better on cut straw with a little grain than upon hay and grain.

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AT $1.50 PER ANNUM,
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Special Contributors for 1872.

W. W. W. Bowie,
Barnes Compton,
Benjamin Hallowell,
Dr. E. J. Henkle,
John Merryman,
Luther Giddings,
Ed. L. F. Hardcastle,
D. Lawrence,
John Lee Carroll,
John Carroll Walsh,
Daniel C. Bruce,
Augustus L. Taveau,
Richard Colvin,
John Feast,
John Wilkinson,
John F. Wolfinger,
C. K. Thomas,
John B. Russell,
Depart. of Agriculture.
Prof. Wm. P. Tonry,
Robert Sinclair,
B. W. Jones, Va.
Geo. H. Mittnacht,
D. S. Curtis.

COAL ASHES.

Mr. John Batte, of Petersburg, Va., desires information relative to the value of coal ashes as a fertilizer.

Mr. B. states an extraordinary experience with the use of coal ashes.

He says, "I used coal ashes as an experiment on Irish potatoes along side of stable manure, a year or two ago, and I was unable to see any difference in the yield."

We shall be pleased to hear from others having tested coal ashes as a fertilizer on any crop. We think Mr. B's experiment must have been carelessly conducted. On some soils an application of a proper quantity of *wood ashes* may have proved as valuable as stable manure.

Wood ashes, or any other alkaline application is highly beneficial in potato production.

The Importance of Intelligibleness.

We often receive communications or letters of inquiry on important subjects, but they have been so hurriedly and carelessly written that they are unintelligible, hence their value is lost and we are unable to reply.

The same thing often occurs in subscribing for the *Farmer*—remittances are enclosed to us with the name of subscriber and postoffice, but without the State or county, leaving us unable to return the remittance, or to send the journal

RURAL NEW YORKER.—This popular and model weekly presents itself in a new form for the year 1872. The pages have been reduced in size and increased in number, which is a decided improvement. The *Rural New Yorker* has no superior in the world, is published and edited by the veteran D. D. T. Moore, Esq., assisted by an able corps of assistants—price $2 50 per year—New York. It should be a visitor to every fireside in the country.

"THE PRAIRIE FARMER"—We call attention to the advertisement of this valuable weekly agricultural journal of the Northwest, and one of the best in the country. It has risen like a Phenix from the late fire at Chicago, and now presents itself in an entire new dress and improved in every department. Address the "Prairie Farmer," Chicago, Ills. Terms $2 per year.

THE GROWING WHEAT CROP.—From the monthly report of the Agricultural Department, we gather that the present growing wheat crop is in medium condition throughout the country. The dry weather in many localities interfered with early seeding. An increase of acreage appears in a number of States.

THE GROWING GRAIN IN CARROLL COUNTY, MD — The *Sentinel* of the 15th ulto. says: The growing grain was somewhat improved by the gentle rains and damp weather about the holidays, but still presents a very unpromising appearance. In some of the fields upon which wheat was sown its presence is hardly perceptible.

MARKET GARDENING IN MARYLAND.—Peter Henderson advises a correspondent at Chestertown, Md., to plant Collossal Asparagus and Victoria Rhubarb as two good paying crops for Northern markets. He also names annual vegetables, and lays much stress on packing for shipment in small, well ventilated packages in which the vegetables will not heat and spoil.

Agricultural and Mechanical Association of Washington County.

At the meeting of the Stockholders of the Agricultural and Mechanical Association of Washington county held on Saturday, the 7th inst., the following named gentlemen was elected officers of the association for the ensuing year:—

President—D. Brumbaugh.

Vice President—D. Zeller.

Treasurer—B. F. Fiery.

Cor. Secretary—Albert Small.

Rec. Secretary—P. A. Witmer.

Directors—B. A. Garlinger, Dan'l. Startzman, Jona. Middlekauff, Jno. A. K. Brewer, Henry Zeller, J. R. Adams, H. H. Power, Isaac Motter, Benj. J. Byers, John H. Fiery.

Carroll County Agricultural Society.

At the annual election for officers of the Carroll County Agricultural Society, held at Westminster, January 1st, the following gentlemen were elected for the ensuing year:

President—Augustus Shriver.

Vice President—Jeremiah Rinehart.

Secretary—Wm. A. McKellip.

Treasurer—Richard Manning.

Board of Directors—Lavid Fowble, Edward Lynch, Louis P. Slingluff, Henry E. Morelock, Joseph Shaeffer. By the terms of their charter they are required to elect officers annually on the 1st Monday of January in each year, and at that time to designate when the Annual Fair will be held. They have accordingly decided to hold the 4th Annual Fair for one week, commencing on the 30th of September and ending on the 5th day of October, 1872, at Westminster.

Frederick County Agricultural Society.

At the annual meeting of the Frederick County Agricultural Society, held in the City of Frederick, early last month, the following officers were elected for the ensuing year:—

President—Dr. Fairfax Schley.

Vice President—Benj. J Snouffer.

Treasurer—Calvin Page.

Secretary—H. C. Koehler.

Cor. Secretary—Charles H. Keefer.

THE AMERICAN STOCK JOURNAL.—The January number is full of good practical articles, handsomely illustrated by over twenty engravings of Horses, Farm Buildings, Sheep, Swine, Poultry, Pigeons, &c. This *Journal* is edited by men that have had a long and *practical* experience in Farming and Stock. Breeding, we think they will satisfy any one, that persons can be *practically* engaged in this business, and yet edit a presentable paper. The *Veterinary Department* is in charge of experienced Veterinary Surgeons, who answer through the *Journal* all questions relating to Sick, Injured, or Diseased Animals, *free of charge*. Specimen copies sent *gratis*, by N. P. Boyer & Co., Publishers, Parkesburg, Pa.

ERRATA.—In January number, page 21, 2nd column, 19th line from bottom, for "dissolution," read *distribution*. On page 22, 2nd column, 25th line from top, for "cashing up," read *catching up*.

AN EGYPTIAN JACK.

We call attention to the advertisement, and the following description of an Egyptian Jack offered for sale at this office, as written by the owner, residing in Delaware county, Pa.:

"Having purchased an Egyptian Jackass from the widow of Comd. Eldridge (late United States Navy) for my son, about two years since, I am now anxious to dispose of him as my son is from home, at school, and will likely remain there for three or four years.

I believe him to be perfectly sound, and one of the finest gaited animals I ever saw. He has four perfect gaits—Rack, Trot, Lope and Run, and you must have a good horse to leave him.

Mrs. Eldridge assures me she had ridden him sixty-five miles in a day, over a very rough country in Egypt. He is a perfect pet; any child six years old, can ride or drive him. He cost $600 in gold in Egypt: and I will sell him for $250.

We do not raise any mules in this part of the country, I would let him out. He is ten years of age *only* and looks more like a poney than a Jack."

The Farmers and Merchants' Guide.—We have received from E. Whitman & Sons, manufacturers, 145 and 147 W. Pratt street, Baltimore, their New Annual Catalogue of Agricultural Implements, Seeds and Fertilizers. It contains a list of the most improved and approved Agricultural Implements and Machinery, Fertilizers and Seeds, with Baltimore prices attached; also giving the component parts of Peruvian Guano, Bone Dust, Phosphate, Plaster, &c., describing their action upon soils, mode of application, and containing many valuable tables of measures, weights, &c. It contains some 190 pages, and is embellished with a great number of illustrations of Implements and Machines, Horticultural Tools, Vegetables, &c. To customers and dealers, and subscribers of the *Maryland Farmer*, it will be sent free on application—to all others a charge of 50 cents will be made. Address E. Whitman & Sons, Baltimore, Md.

The Southern Cultivator.—This old Southern favorite, under the management of the Messrs. Wm. & W. L. Jones, gives evidence of great vigor, though it has now reached the ripe age of thirty years. Every planter studying his own interest should at once enrol his name on their subscription list. Wm. & W. L. Jones, Athens, Geo.—price $2 per year.

The Rural Carolinian.—The January number of this valuable agricultural monthly is received, and it commences the New Year full of promise for usefulness. It is one of the very best magazines in the country, and reflects credit on its publishers—Walker, Evans & Cogswell, Charleston, S. C.—price $2 per annum.

The Southern Farm and Home.—This is a valuable monthly devoted to agriculture and its kindred sciences. It is gotten up in exceeding good taste and conducted ably. Published by Boyle & Chapman, Memphis, Tenn., and edited by W. M. Browne—price $2 per annum.

THE SCHOOL FESTIVAL.—This beautiful little Quarterly Magazine, devoted to new and sparkling matter for *School Exhibitions* and public days, is received for January. No teacher or pupil should be without it. It costs only fifty cents a year; single copy, fifteen cents. Write for it, to Alfred L. Sewell, Publisher, Chicago, Ill.

REVIEW OF JANUARY NUMBER.

To the Editors of the Maryland Farmer:

I have read with a great deal of satisfaction your January number, and congratulate you on the steady improvement and prosperity of the *Maryland Farmer*. I am tempted to make a few notes of thoughts occurring as I have looked through its pages, which you may perhaps think worthy a place among the *Farmer* talk of your pages.

DOGS AND SHEEP.

You have treated this subject well and fully; let us hope that our legislators will take prompt and wise action upon it. It is of too much importance to be trifled with, when we have now, more than ever, so many thousand superfluous acres, which would yield as wool and mutton, if the superfluous curs would give us leave to keep sheep. Let every dog be taxed, and the sum so raised go to an insurance fund to pay the losses incurred.

HORSES.

I agree very cordially with your correspondent, *Patuxent Planter*, in his estimate of the *Turf, Field and Farm*, but not in the importance he attaches to running and trotting horses as an agricultural interest. Without being, as I think, in the least "puritanical," I confess that to my mind the impulse given in this direction, by our State Agricultural Society, seems a serious evil. There is too close an association between fast horses and "fast" young men, to allow thoughtful people to look with equanimity on the great prominence which horse-racing takes in our exhibitions of agricultural industry. When we have done our best to develop the feeding and breeding of farm stock proper, cattle, sheep, hogs and farm horses, it will be time enough to talk about the breeding of racers and trotters as a branch of agricultural industry in Maryland. It is an outside interest, not belonging legitimately to agriculture, and its fascinations are dangerous to our young men.

IMMIGRATION.

While immigration will increase rapidly the wealth of the State, and help us to occupy profitably our lands, I am not so much in love with the advantages to come of it as not to deprecate the evils that may accompany them. A very large influx of *new* people, unless they be very *good* people, I should consider a great evil. I am antiquated in my notions, I know, but while I think good morals and good manners better than great material wealth, I prefer keeping somewhat pure our present stock of Maryland people. There is no objection to moderate judicious crossing, and I do not mean to intimate that there are not many quite as good people elsewhere; I only fear a large introduction indiscriminately of foreign material. Yet this, after all, is not likely to be, judging by our past endeavors in this behalf.

I think a great deal, good *Maryland Farmer*, of our good Maryland people, and seriously believing there is just now no better "stock" on the habitable globe, it seems to me just *the* stock we should give our most diligent attention to breeding and rearing. "*Crescite et multiplicamine*" is our State's motto, and should be our policy as statesmen. Let us encourage our young people by all proper means to marry and to *raise children*. Let it become the chief glory of Maryland homes to be full of these gifts of God, the children he is pleased to give us, while we see to it that they are duly trained and taught. This brings me to a word on

EDUCATION.

I had intended to say while speaking of immigration that, to my mind, the evil we suffer from, practically, in our agriculture, is not so much scarcity of laborers as scarcity of means to command their services. So far as my observation extends, I have not found that those who can provide comfortable homes for farm hands, and pay them punctually every month, or every week, or every day, if they want it, have any scarcity of hands. But there is a woful want of ready money among farmers, and I have thought that a better, at least more immediate remedy, for the evils they suffer would be some general method of relief by an extended loan on land security, which would in some measure supply the working capital our agriculture so much needs. Yet when we think again, as we do sorrowfully, how ignorant a large proportion of our people are of the very principles of agriculture, and that those least likely to profit by such help are those who would most largely seek it, there seems no hope that way. We turn then again to the children, and beg of our wise men to look to it that no means be omitted to train them to better things.—Let education be our first and last thought for the improvement of our affairs, and chiefly let our boys be taught in all the ways of good farming.

MARYLANDER.

AGRICULTURAL.—The *Fat Contributor* gives the following information in regard to agricultural matters:

A correspondent asks us what we think of late plowing. Plowing should not be continued later than ten or eleven o'clock at night. It gets the horses in the habit of staying out late, and unduly exposes the plow. We have known plows to acquire spring-halt and inflammatory rheumatism from late plowing. Don't do it.

M. DEVERGIE, a French chemist, finds that water containing only one four-thousandth of its weight of carbolic acid sufficed for the disinfection of the Morgue in Paris during the hottest weather, when it contained six or seven bodies.

For the Maryland Farmer.

TO YOUNG FARMERS.---NO. 2.

In pursuing these inquiries and instructions, with our young farmers, I ask them if, in their experience at home or abroad, they have ever noticed how much time is often lost and mischief done for want of good bars or gates through which to go in and out of fields? and in place of which *gaps* would be let down in the fences, at some hap-hazard places, all of which is a great loss of time, and does more or less to shake down the fence; besides being a shabby, disgraceful appearance—and is not the best way; besides often leaving rails off, and low places in the fence, which invite cattle to be breechy. And this loose habit proves more expensive than having good bars and gates.

Again, the same queries and hints may be suggested in regard to doors and entries to the barn, stable and sheds. By all means, let this shiftlessness be sternly avoided, as both discreditable and unprofitable, in the long run.

Then again, my young Agricolas, adopt a practice the principle of—"place for every thing, and every thing in its place." Pillows and old hats do not look as well stuck in broken windows as on clean beds and sensible heads—mind that.

Have you ever seen 100 bushels of good shelled corn raised on an acre of land—or 500 bushels of fine potatoes raised to the acre? Well, it is easily and profitably done; I have done it, more than once; and while, of course, it cost more per acre to do the tillage, the crops cost less per bushel; and what one has done, another can do, with the same effort. Here is the way I did it, and on only medium good land. A light coat of barn-yard manure was spread on the ground and plowed under, some seven inches deep, in the fall. The following spring the ground was plowed a little deeper; then furrowed out, with a light plow, about four or five inches deep, north and south, nearly four feet apart—then lines or marks drawn across, east and west, about three feet apart, and at the angles or corners a light shovel full of manure thrown in, for the hills; here the corn, good sound seed, was planted, five kernels to the hill, with a handfull of old ashes or lime thrown in each hill, and all covered about two inches deep, but the seed was soaked a few hours in salt brine and dryed in plaster or guano before planting. When the blades were up, enough to distinguish the rows, it was gone through with a hoe lightly and dressed up; then in a few days after a three-toothed cultivator was worked through the rows, north and south, which pretty much levelled it, by pushing the dirt into the rows, and killing the weeds—but allowed no hilling up. When the corn was about two feet high, went through and carefully thinned it out to three stalks in the hills, leaving the largest and best; and those cut out were saved and fed to the cows, which amply paid for gathering in good feed and increase of milk; at the same time the cultivator was run through again. From this operation I obtained 505 bushels of sound shelled corn from five acres of land. The potato ground was treated in the same manner, but the seed was planted in drills, three feet apart, dressed with old lime and ashes, and gave 500 bushels to the acre.

LAND MARK.

Herd of C. E. Coffin, Esq.

The following on this celebrated herd we clip from the *Prince Georgian:*—Below we give a brief notice of the herd of Charles E. Coffin, Esq., of Muirkirk, in this county. His herd consists of about thirty-eight of various sizes and sexes—at the head of which stands the imported bull Lord Abraham, a fine 2 year old, deep in the Booth blood, and winner of many prizes at the various fairs held in Maryland and other States. He has also the 6th Earl of Oxford, a beautiful two year old, roan, with remarkably straight top and bottom lines—evidently a quick feeder and good handler. Mr. Coffin's cows, however, are even more striking than his bulls. Masterpiece, by the 6th Duke of Thorndale, a roan cow of great size and substance, seems to be appropriately named; though Rowena 2d, by Hotspur, and Elvina, by Duke of Geneva, would contest the prize very closely with her. The Elvinas, of which Mr. Coffin has quite a number, are evidently a family of milkers as well as feeders. Portulacca, red, an imported heifer, is an animal of much more than usual merit; she was secured by Mr. Coffin at a cost of $2,200, and will no doubt prove a valuable addition to his herd. Sonsie Lassie, red with some white, is little, if any, behind Portulacca in those points which go to make a perfect Short Horned heifer. Mr. Coffin's herd, much the largest in either Maryland or Virginia, has many other animals—cows, heifers and calves—which do credit to his success as a breeder and to his judgment as a buyer.

RECEIVED.

From Peter Henderson & Co., seedsmen, New York, their Annual Descriptive Catalogue of Choice and Select Flowers. Vegetable and Agricultural Seeds, Horticultural Implements, Fertilizers, &c. This is a very complete Catalogue and numerously illustrated.

From A. Winch, Philadelphia, a copy of the Old Franklin Almanac for 1872—price 20 cents.

From Wilcox, Gibbs & Co., Charleston, S. C., a copy of the Southern Agriculturist Almanac and Farmer's Manual for 1872.

From Geo. W. Childs, Esq., editor of the Philadelphia *Ledger*, The Public Ledger Almanac for 1872. It is full of useful information and issued every year, and distributed among the subscribers of *The Ledger* gratuitously.

From A. Bryant, Jr., Princeton, Ill., wholesale price list of Bryant's Nurseries for the Spring of 1872.

BUCKWHEAT CULTURE.

To the Editors of the Maryland Farmer:

As I am a diligent reader of the *Maryland Farmer*, and just read what Mr. Wolfinger had to say about buckwheat, thought I might give my experience on the culture of buckwheat. We had a very remarkable dry season in this section, the past summer of 1871. I have upon my farm (which is one of the finest in the State) a meadow of five acres, in which a plow never entered. It was always considered too wet to work. In June last I had it drained, *one* ditch running the entire length, and *three* cross ones entering into the main one. I found in less than ten days, the springs were entirely dry. We at once plowed the ground, using four mules; and it was well done. July 5th we harrowed, and worked the soil as well as could be done. On the 8th of July, we sowed part in buckwheat—about three acres—one bushel to the acre. It soon came up, grew finely, and was considered by all who seen it, a very fine patch of buckwheat. A frost came about the 20th of September and killed more than half, I am sure.

I then had it cut—in a few days we gathered it in the barn, and tramped it out. We got fifty-five bushels good seed, and about as much that was worthless; the frost having killed it. The seed I had ground into flour at Mr. John Heyser's mill, near town, and it was considered the very best buckwheat flour that was ever offered in this market. I sold it at $5.00 per hundred. This was the first that was ever raised about here, to my knowledge, and was quite a curiosity. The mistake we made was in not sowing earlier. It ought to go in not later than June 20th. My meadow I got in perfect order, by harrowing and using a cultivater. The last week in September we sowed down in *wheat* and *timothy*, both looks quite well, so far. I am a young man, and only learning how to farm: was determined to cultivate a meadow that had been so long neglected. There is no such word as "can't."

C. W. Smith,
Verdant Mead, near Hagerstown, Md.

Inspections of Tobacco.—The following table gives the inspections of tobacco in Baltimore during the year 1871, as compared with those of 1870:

Descriptions.	1871—*Hhds.*	1870—*Hhds.*
Maryland	30,934	25,696
Ohio	14,645	13,614
Virginia	398	471
Kentucky	3,573	1,584
Total	49,550	41,365

The above shows an increase of 8,185 hhds. during the past year, viz: 5,238 hhds. Maryland, 1,031 hhds. Ohio, 1,989 hhds. Kentucky, and a falling off of 73 hhds. Virginia.

SUNDRIES:

And Chips from a Work Shop.

No. II.---IMMIGRATION.

I am pleased to see you taking up the question of immigration so valiantly. If a flood of immigration would visit Maryland it would be our salvation, and those who oppose it are fighting against the best interests of the farmer, and should be mercilessly exposed in the public press devoted to his interests. Other States are moving in this important matter *as States*, and Maryland should take State action in the premises, as private enterprise, however efficient in other fields of action, has not in this matter sufficient stimulus—hope of gain—to produce the best results. The private enterprise upon which heretofore has devolved the task of bringing in immigrants, has not been represented at the *source* of immigration by active, competent agents, and without this adjunct to successful enterprise, in view of the obstacles to be overthrown, Maryland must remain unserved.

Your correspondent—the Judge—referred to these obstacles in a previous communication, but did not distinctly state what they were. I presumed he referred to the action of the railroad companies, whose interest it is to have the immigrants who land at Baltimore, continue their journey to the far West, to collect of them the fare of their transportation thither, instead of losing that large amount by their settling in Maryland. It appears to me that this action of the railroads is perfectly proper and legitimate; and if the State of Maryland cannot compete with this opposition and wrestle for victory over the fountains of prosperity, she should not enjoy the spoils of conquest; but I agree with those gentlemen in the immigration movement who think that a proper presentation of the claims and advantages of Maryland at the proper places, by competent agents, would result in our success. I hope the State will inaugurate some action based upon the best plans of the wisest heads in the movement to accomplish the end in view, as stated by your correspondent, viz.: the occupation and improvement of the waste and vacant lands of Maryland.

Buckwheat.

Your Pennsylvania correspondent propounds some inquiries concerning this crop. I have heretofore raised forty bushels to the acre of buckwheat, although not an extensive grower. For his latitude I should judge about the first of July to be the proper time, although it is a crop so completely subordinate to the state of the weather, that no definite calculations can be based upon its cultivation, no matter at what time sown. I should, however, con-

sider April, May and June too early to sow. Buckwheat is very susceptible to the assaults of two enemies: heat and frost. If sown too early the extreme heat of midsummer "blasts" or withers the tender blossom of the susceptible plant; this prevents "filling," and accounts for the large number of light or sham grains found in buckwheat after a hot season.

If sown too late, the frost overtakes it, which also suspends the ripening process, as in your correspondent's case, in which his own view of the advantages of earlier sowing were correct.

Wooden Collars.

This matter was discussed in the columns of the *Maryland Farmer* some time ago, and I revert to the remarks then made in view of the announcement I recently saw in the public prints that a citizen of Maryland had obtained a patent for a wooden collar for horses. I said the matter was discussed; I should say agitated, for the testimony was all on one side, and its importance will justify a thorough examination of the subject in consequence of serious losses from diseased shoulders in horses, and the higher motive of mercy to these faithful ministers to man's necessities. A writer signing himself Fessenden took the ground—

1. That the present huge collar chokes the horse in summer, and chills him through the lungs in winter.

2. That a collar made of white bass, or other light, tough wood, would never heat, gall nor chill a horse.

3. That experience has demonstrated that a hard wooden surface, polished and kept clean, is the safest, coolest, best and healthiest collar ever used.

4. That they will only weigh one-third as much as ordinary collars, and unite hames and collar in one. No rough surfaces are worked up, no sweat is absorbed to cook a scald, fresh air passes around the collar, evaporating the moisture and keeping the skin dry, the hair is not chafed and fretted, and the horse's health is freed from the incumbrances of collar disease.

As illustrations of the superior quality of a hard, non-absorbent surface on a horse's shoulders, he presents the following instances:

During the war it was found necessary to remove an equipment factory in the South five hundred miles. The number of collars for the teams employed was insufficient by forty, which were made of wood, polished and tied on by ropes through each end.

At the end of the toilsome journey all the horses and mules that used the ordinary collars were severely galled, nearly ruined, and for a long time remained unfit for service; whilst those that wore the wooden collars, were ungalled, and ready for work as usual.

Several planters being unable to procure collars during the war, made them of wood, and conducted their business with success, and comfort to their mules and horses.

5. That the uncovered hand of an axman will be more comfortable than the hand of one who uses gloves for his protection. (This every farmer will concede.)

6. That the ox bow and yoke are proof to the point, and predicts that iron ox-bows will be used before many years. (This prediction has been verified; the writer has seen iron bows in common and frequent use.)

7. That hard rubber may find some place in horse collars and prove invaluable. (This intimation has proved well founded; rubber collars are now manufactured in Baltimore. Why does not the manufacturer advertise his goods in the *Maryland Farmer*, and thus reach a class who would be glad to avail themselves of his articles?)

Commenting upon these remarks, one of your correspondents from Richmond stated that the idea of wooden collars was a practical and valuable one, having been successfully demonstrated to his knowledge thirty years ago by one of his neighbors, who used no other kind; that hames and collar were one, and that they never chafed his horses—he used poplar and made them himself.

This correspondent alludes to wooden plow saddles, which perfectly prevent the galling of a horse's back, but as my space will not permit me to give details of this contrivance, I refer your readers to the communication on page 42, February number, 1869. These articles brought out another correspondent who says: "Wooden collars are not new; I remember hearing of their use in the old homestead, which let all the harness of the horse (except head stall,) by simply unfastening a string, and which never galled a horse. I also am reminded by the condition of my leather collars that I must replenish my stock, and would buy wooden only if I could get them."

Will the inventor or manufacturers of the recently patented wooden collars advertise their wares in your excellent magazine, that we may know where to procure them?

Choice Jersey Cattle, Sheep, and Fowls.—We call attention to the advertisement of J. Stricker Jenkins, of Baltimore county, offering for sale imported Jersey cattle, pure Southdown sheep, and choice dark Brahma fowls. These are all of the finest description and worthy the attention of those desiring to purchase.

SYSTEM IN FARM MANAGEMENT.

Success in the fullest degree cannot be attained in any business without thorough system in conducting it. This is especially true in the management of a farm, whether small or large, whether in simple or mixed husbandry, but in the latter it is indispensable that each branch may receive timely and due attention.

Failure and loss in many of the most important branches of husbandry may generally be traced to the absence of system, and for want of a proper classification and a proper assignment of each branch of work to its respective season.

Numerous examples might be given, had we space to devote to a detailed description of them, but a a few will suffice to illustrate how disastrous and unprofitable will be the result, if conducted in the usual hap-hazzard mode. On a farm, in the management of which the work of winter is deferred until spring, that of spring until summer, that of summer until autumn and that of autumn until winter, or, if impracticable to perform out of season, is neglected altogether, haste, confusion, neglect, disappointment and failure are inevitable, and if such a course is continued, discouragement and bankruptcy must be the result. If storage for crops and stables for animals have not been provided until they are needed, the former must be stacked, in which system there is often a waste exceeding by far the interest on the cost of building for proper storage.

Hay or grain thus stacked is generally injured by wet both at the harvest and the threshing and feeding season, greatly impairing the quality of both the grain and straw, and equally reducing the quantity and quality of hay and fodder; the latter, however, we regret to say, is rarely stacked, or stored, even by those claiming to be economists, and the result is that little or no profit, is derived from it, whilst the more provident and systemetic, by storing from the weather, and properly preparing, often make the stalks of corn equal in value to the average hay crop grown on an equal area.

We know of a few instances where the most is made on the stalks of corn, by housing at the proper time, and cutting and scalding, or steaming and adding a trifling cost of brand and meal, and both horses and cattle are kept in an excellent condition throughout the foddering season, and all the hay grown, which is more merchantable, is marketed, making an important item in the gross cash receipts of the farm.

Little or no manure is made by the stacking system, hence, crops for which it is needed and that might have been supplied, had the animals been fed in stables, are starved and fail for want of it. The failure is not confined to the grain crop, but the setting of grass is last. This loss is much greater than that of the grain, as the land at the time it is usually laid by to grass, has been exhausted by a rotation that totally unfits it for further cropping, nevertheless, the plan usually adopted in case of a loss of grass set, is to put another grain crop and seed again to grass. No provision has been made for fertilizers for the attempt to make the extra grain crop, and in nine cases out of ten, the failure in both grain and grass is more certain than in the first instance. This class of farming, if it may be called farming, is the disgraceful indiscreet means by which hundreds of thousands of acres of the worn out and forsaken lands of our country have so become.

Under a better system of management, where crops are stored and animals are stabled, it is common to see negligence, and profligacy in the care and application of the manure, or materials that should have been converted into manure. Animals are compelled to go for water to a neighboring brook, thus wasting their droppings, and necessarily exposing them to a degree that the benefit that might have been derived from the stable is mainly lost.

The little manure made in the year is often suffered to be washed by water from falling rain, and generally there is superadded all that falls upon the roofs of barn and sheds.

Then, if hauled in winter, fully eighty per cent. of the weight hauled, is rainwater, no better than that which falls on the fields; but the hauling is generally deferred until the teams should be plowing for the spring crops, when that important work must be deferred and the little water and the little manure left, after being washed for months, is to be dragged on vehicles running hub deep, and by teams wallowing through mud, which having recently thawed is utterly unfit for a road. When this unseasonable work is performed by the teams they are in a condition illy adapted to the work of tillage, which by the time it is to be performed, under such management, has become hard and will require double the power to till it, and when broken up is in clods, unfit to plant or seed, and as unfit to produce. Thus by deferring the work of one season and crowding it upon another, the entire system of the year is deranged and the consequences above described must be borne as it is too late to recover what is thus lost.

At the commencement of the year, all work which it is proposed to attempt to execute during that period, should be fully classified, and written out in the order deemed most discreet, apportioning to each month its respective share, and daily reference should be made to this schedule.

In case of a failure to carry out all the work allotted to a month, owing to any cause, that portion not executed in due course, should be transcribed into a space in the schedule, left for the purpose, preceding the record originally allotted to the work of the succeeding month, that it may if practicable, come in with it, and not be omitted, or neglected. With this system there is less danger of omitting altogether that which failed to be executed in accordance with the original allotment.

Prior to draughting the programme which is to be the guide in precedence and execution of the work for the year, the farmer or planter should walk, or ride over his entire domain, and on the spot, note all that he considers necessary to be done during the year, and what portion of it he feels that he has the time, force and means to perform, apportioning each job to its respective month at the time, whilst all local circumstances are under his eye.

This field note book he should always have in his pocket, that it may be at hand whenever needed, and much of its matter may be arranged in order and written out in the enlarged and correct guide to labor whenever a favorable opportunity is presented. This course will be found of infinite service to all in conducting a farm, but its advantage will be especially advantageous to the inexperienced.

A plat of the farm with all its divisions and subdivisions should be drawn, on a scale ever so small, on a page of the *Yearly Guide* book or Farm Calendar.

The lots should all be numbered, and the area of each should be placed in a reference table; and if more than one crop is to be grown in a lot, the lines of the subdivisions may be inserted with a pencil. A Farm Account should be carefully kept, leaving liberal marginal space for notes on the character of the season and the causes of all successes and failures.

We hope these timely suggestions aiming at the introduction of more system in farm management, will induce a few, of our numerous readers to test them, with such improvements and perfection of modus operandi as their respective system of cropping, grazing, &c., may require. We also hope that those who attempt it, will do it in a manner that will afford reliable data by which to govern their subsequent operations, and to induce others, by reporting and publishing their experience, to adopt and pursue a similar course, thereby extending its general usefulnes.

We are confident that the beneficia results arising from the course that we have suggested, would be so apparent, that once embarked in, it will be perpetuated and will be considered indispensable to successful farm management. A carefully kept farm account will add greatly to the pleasure and satisfaction, as well as the profitableness of the vocation of every husbandman.

It will speedily lead to the abandonment of every unprofitable branch, and the extension and improvement of the profiable; or without it the farmer is unable to decide whence profit or loss arises.

We hope to receive at an early day some valuable suggestions on the matter under consideration from some of our Agricultural Colleges, also on other topics no less important, which we shall gladly publish for the benefit of those who have not been so fortunate as to have been educated at an Agricultural College.

LAND SALES IN MARYLAND.

The following public sales of land were made during the month of January last:—

Talbot County.

Farm near St. Michaels, containing 44 acres, to Capt. Sullivan, for $775—sold for L. M. Reynolds, trustee of H. H. Goldsborough. The farm "Pennsfield," situated on the South side of the town, was withdrawn—$40 per acre being the highest bid. It could have been bought for $45 per acre. It is said Judge Goldsborough has refused over a hundred dollars an acre.

The Easton *Star* says: Mr. Frank Pascault, having sold his farm in Cecil county, to Mr. Cockran, of Delaware, at $140 per acre, has rented the three story dwelling, corner of Washington and Cabinet streets, with the intention of making Easton his residence. He will go to work at once to improve "Mulberry hill," his farm, near this place, and hopes in time to make it as productive and valuable per acre as the farm he has just sold.

Kent County.

The Nichols farm, in Broad Neck, containing 403½ acres, was sold, on the 8th inst., to W. J. Vannort, for $9 750. A mortgage held on the property by Mr. Vanort makes it cost him about $11,160.

George Chandler, has sold a farm of 284 acres, situated near DuPont's Station on the Delaware Railroad, in Kent Co., to Ellis M. Nichols for $17.000, Mr. Chandler taking the farm of Mr. Nichols, near Centreville, containing 79 acres, at $12,000.

Harford County.

Sold at public auction, at Belair, a tavern stand with 79 acres attached, near Conowingo Bridge, to Hugh Moore, of Pa., for $4,500.

Sold for H. W. Archer, Esq., trustee, 60 acres of unimproved land, situated near Federal Hill, this county, to Col. Edward Rutledge for $875.

Sold for George L. Van Bibber, Esq., trustee, a farm, containing 208 acres, situated near Churchville, to Abraham Shertzer of this county, for $6,500.

Frederick County.

Sold recently the manor farm of the late Jacob Dutrow to R. J. Dutrow, at $137 per acre, amounting to $21,444 78. Also the farm lying in Mt. Pleasant district, containing 135½ acres, sold to Robert J. Dutrow, at $100 per acre. $13,561 71.

Sold by Mr. John Musser, his farm, containing 230 acres, and situated about two and a-half miles east of Frederick city, to Nr. Brown, of Clinton county, Pa., for the sum of $24,000.

Calvert County.

Joseph A. Wilson, Esq., trustee, sold at public sale, to Jos. Lyons, Esq., for $2,725, the farm formerly belonging to Wm. I. Leitch, deceased, situated near Huntingtown, and containing about 100 acres.

Baltimore County.

Jas. W. Owings, auctioneer, sold at Towsontown, for William S. Keech and Thos. J. Hunter, trustees, a track of land containing 22 acres, situated about half a mile from White Hall Station, N. C. R. R., improved with a log dwelling, stable, &c., to Mr. John Wise for $62.25 per acre.

S. H. Gover & Sons, auctioneers, sold for Chas. W. Ridgely, Esq., trustee, a tract of land near Monkton, half a mile from Pleasant Valley Station, N. C. R. R., containing 134 acres, 2 rods and 4 perches, improved by a large frame dwelling, goon barn, stables, dairy &c.; purchased by Mr. John T. Ensor for $3,100.

Col. W. A. McKillip, trustee of Alfred R. Blasse, sold the property of the latter at Pikesville; containing 31½ acres, with improvements, to A. E. Lilly, of Baltimore, for $122 per acre.

Our Agricultural Calendar.

FARM WORK FOR FEBRUARY.

We are now entering upon the month in which the most thoughtful consideration should be given to the work of the spring season. All the plans for spring crops should have been carefully arranged already; but the executive portion of the work has often to be left to be governed by the circumstances in each case. No particular rule can therefore be laid down, as all rules of this kind must depend upon the labor that can be had, the condition of the fields to be cropped, and the means that can be applied to the caarying out of the work in the best manner. We say "in the best manner" because in these days it has come to be well understood that to till exhausted lands, and to attempt to make up for want of fertility by extending the number of acres under cultivation, is a most unprofitable business. It is true that the prices of all the cereals in the Atlantic States, and where there are easy and cheap means of reaching the best markets, have risen very much during the last twenty years, but it happens unfortunately that this change has been accompanied by a scarcity of labor when it is most wanted, and by higher rates of wages. Nevertheless, we believe that judicious farming, in spite of its many drawbacks, can now be made a paying business, and that whilst it will not return the profits that accrue from mercantile operations, it is attended with fewer risks. If a crop fails, the land remains, and although the receipts in money may be small, house rent is free, and many of the articles used in the family are grown upon the farm. Under any circumstances, therefore, a careful forehanded farmer cannot be beggared, although he may be deprived of many of the comforts which ought to spring from labor well applied. The work for the month is as follows:

Composts.

Nothing pays better than to employ spare days in the collection of materials for composts. We have so often urged the advantages of collecting all sorts of rough materials, and composting it with barn yard manure, at the rate of one load of manure to three loads of rough vegetable fibre, and made into a heap in alternate layers, lessening in thickness as the heap rises, that to urge the matter further would be altogether superfluous.

Ashes and Slops.

Save the ashes of wood fires, and the slops from the house. They are both rich in potash, and also contain some lime. These are most essential to the fertility of the soil, and may either be used in composts or alone. No constituents of the soil are so heavily drawn upon by successive crops as potash and the phosphates. As these enter largely into the composition of the grain, they cannot be dispensed with, and wherever they are deficient must be replaced.

Out-Buildings.

See that these are in good repair, and either whitewash them, or color them of some warm neutral tint. The red paint used on the barns of Pennsylvania lasts well, but such barns are not at all picturesque, whilst any of the metallic paints or washes of a lighter color are quite as good, and present a better appearance to the eye.

Fencing Stuff.

See that more fencing stuff is gotten out in the woods, if required, before the sap rises. If time presses, cut the trees simply into logs of the required lengths, and pile the latter up to season. They can be split at odd times afterwards.

Cleaning Up.

Have a general cleaning up before the spring work begins. Grub out the fence rows, and let neither sassafras shrubs nor briars, nor bushes, remain. The weeds in fence rows are often a fruitful source of annoyance by the dissemination of their seeds over the cultivated fields. Therefore get rid of them as much as possible.

Sowing Clover and Orchard Grass Seed.

There are years when in this latitude February will be found an excellent month for sowing orchard grass and clover seeds on winter grain. When such weather occurs as is favorable to the work, and the soil is in good condition, proceed at once to sow the seed separately, and harrow lightly in, and follow immediately with the roller. The quantity of each to be seeded is about a peck of clover seed to a bushel of orchard grass per acre.

Ploughing.

Sometimes there are two weeks of open weather during this month in which ploughing may be done. In soils inclining to clay, and therefore liable to be wet and compact, do not plough at all until the soil becomes mellow and friable. Lighter soils which contain more sand and loam may be ploughed in February to advantage.

Tobacco Beds.

Attend at the earliest possible moment to the preparation of seed beds for tobacco. It not only offers an opportunity of getting plants early, but allows of time for reseeding if the first lot of plants happens to fail.

Gates and Bars.

Wherever it can be done, go to work and substitute gates for bars.

Wagons, Carts, &c.

See to these, and to all other farm implements, and get them into condition for immediate use whenever they may be wanted. Looking, also, to the trace chains, hames, collars, and wagon and cart gearing, and wherever repairs are wanted have them done at once.

Store Hogs.

Feed these regularly but moderately three times a day, and be sure to furnish the pens with plenty of rough material to work up into manure. See also, that they are supplied freely with charcoal, or rotten wood and ashes, to aid digestion by correcting acidity.

Breeding Sows.

Particular attention ought to be paid to breeding sows. Each sow should be kept in a separate pen. the sleeping department of which should be made warm and comfortable, and the food should be good and regularly supplied, but not in such excess as to allow her to take on too much fat.

Milch Cows.

During the trying months of February and March when cows become reluctant to eat dry fodder, even of the best kind, treat them to chopped hay moistened with bran or meal, and to cut roots, if to be had, but certainly to occasional messes of slops.

For Calf Cows and Heifers.

These should be cared for as advised above, only that even greater attention should be paid to them, and that the food should be more nutritious, and the slops made richer with corn meal.

Garden Work for February.

The work to be done in the Garden during this month is as follows:

Hot Beds.—To obtain early vegetables, requires the use of a hot bed. Such beds are so simple, so easily constructed and cost so little that they are really within the means of every farmer, and of their great advantage there cannot be but one opinion.—Assuming that the manure has been hauled, the hot bed frames properly set and that the heat has risen —six inches of rich sifted soil should be next used to form the seed bed; and as soon as the temperature is such as will admit of seeding—lay off the bed into compartments and sow the seeds of early and late cabbages, tomatoes, egg plants, lettuce, &c., sowing radish seed sparingly between the rows as radishes mature early and will not therefore interfere with the later plants.

Celery.—As soon as the frost is out of the ground celery seed may be sown in a warm, well prepared border in the open air.

Peas.—So also with peas, which are quite hardy and will stand well a moderate frost—it is desirable however that the hills in which the peas are deposited should be made deeper than usual and that the soil should be moderately rich.

Spinach.—It is scarcely possible to make the soil too rich for spinach, which, to give it that succulence which is so desirable in this excellent anti-scorbutic should be grown rapidly. Select, therefore, a bed well protected from the north winds and manure it heavily with rich, well rotted manure, spading the latter in deeply. Rake all off and sow the seed thinly in drills an inch deep and twelve inches apart. In frosty weather strew straw lightly over the bed.

Parsnips, Carrots, Beets.—It is scarcely time to sow the seeds of these roots. But if the season should prove an open one, it may be done to advantage, for such are wanted for early use. Choose if possible a light sandy loam, which has been well manured the previous summer or fall. Spade it deep and sow in the seed of carrots and parsnips in drills from twelve to eighteen inches apart, making the drills for beets from eighteen inches to two feet apart.

Grape Vines.—It is better to prune these in the fall. If it has not been done, let it be done at once before the sap rises. Head back the canes that are too long and cut back to a single eye every alternate cane, leaving at least an inch of wood above the eye. Let them remain free from the trellis until they have put out their first leaves and then tie them up. Dress the soil about the roots with a compost of well rotted manure, wood ashes and bone dust—a full supply of the latter being especially desirable.

Raspberry Vines.—Trim and tie these up. Fork well round each vine to make the soil light, and be sure to use manure freely.

Gooseberries and Currants.—These ought to be pruned by the middle of the month. Apply a good dressing of manure to the roots and fork it in. If cuttings are required, take shoots of the last year's growth from eight to twelve inches long, and cut out all the eyes but three or four, that are to form the future head. Plant the cuttings in a deeply spaded, well prepared bed and shade them for a short time from the rays of the morning sun. Water freely until the cuttings strike root, and after that water only occasionally.

Government Land West of the Mississippi.—West of the Mississipi river the United States still own 943,472,563 acres, distributed as follows: Iowa, Missouri and Arkansas, 16,000,000; Dakota and Wyoming, 145,295,284; Montana, 86,904,605; Kansas, 43,148,076; Nebraska, 52 523,637; Colorado and Idaho, 117,800,000; New Mexico and Utah, 224,140 000; Nevada and Arizona, 136,000,000; Minnesota, 36,776,170; Indian Territory 154,000.

Horticultural.

Prepared for the Maryland Farmer.

PEACH BORER—CURCULIO—FROST ON FRUIT—SAP AND TREES—SOUTHERN TREES—HOME—DIGNITY AND ATTRACTION OF FARMING, &c.

WASHINGTON, DEC 31, 1871.

Interesting discussions were had on the above subjects at the December meeting of the Potomac Fruit Growers, which may be important to fruit growers elsewhere; and therefore I here give a brief synopsis:

EARLY FRUITING OF PEACH TREES.

To illustrate the adaptability of the soil and climate for fruit raising, I would state that two years ago last February I planted a number of peach-stones in hard, dry, gravelly soil; several trees from these stones bore fruit this last season, and from one tree, a large beautiful one, I gathered three dozen fine ripe peaches the first day of September last.

A. T. C. DODGE, Capital Hill.

Mr. Saul stated that the peach was one of those fruits that required careful selection of varieties, and these should be grown so as not to become mixed; that there were several good varieties that would produce themselves if kept carefully separated from others. In regard to earliness of fruiting, he remarked that that depended mostly on the oil and season, a light gravelly soil being most favorableto early bearing.

REMEDIES AGAINST THE BORER.

Major King—What description of soil is most likely to induce the attacks of the borer?

This subject was spoken to by various members, but those most to the point were—

Mr. Saul.—I will state one fact from the experience of a very successful grower of peaches. He employed a very simple remedy, which was to have a shovelful of night soil placed at the foot of each tree. This done once a season was found to prevent the attacks of that insect. The borer attacks the tree early in the season, and bores into the heart of the wood.

Mr. Dodge.—I have seen the tree girdled by it, but in soft ground.

Major King.—When the tree has been long neglected and the season favorable, the tree will be girdled, but the insect can be easily dislodged with a knife. In my father's orchard I was accustomed to scrape the earth away from the roots in the fall and apply slacked lime; re-covering with earth in the spring.

Mr. Saul—That operation is very frequently done, but the cold does not kill the insect. We know that insects indigenous to any country can stand any degree of cold incident to its climate; the chrysalis may be frozen through as hard as crystal, yet, being placed in a warm place, be thawed out and show life again. The lime may kill the insect, but the cold not.

Prof. Taylor.—Entomologists say it will.

Mr. Saul.—My experience is that it will not. For many years I have taken them from the frozen ground into the green houses, when they would come to life. I am not much of an entomologist, but have been intimate with those who are, and their opinion is the same as mine.

It was maintained that lime and exposure to the weather hardened the bark, and compacted the soil.

Mr. Gillingham.—That I think is correct—the object is to harden the soil, and bark of the trees.

Mr. Smith.—Jarring and shaking the trees is a good remedy against the borer as well as the curculio.

Major King.—Will Col. Curtiss state what has been his experience in regard to the borer, in the West.

Col. Curtiss.—I can only speak from a short experience. After one year of successful bearing the peach trees were killed by a severe winter; and do not recollect of having seen the borer. It was necessary, however, to ward off the curculio, and for that purpose we shook the trees and allowed pig and poultry the range of the orchard. Lime and ashes were also applied about the roots. The orchard was sheltered from the west and north winds, but open to the south and south west, which I now think is the most unfavorable of all exposures. Trees should be protected by boards or straw against the sudden hot sun on the south and south-west sides, which suddenly extracting the frost, blights and cracks the trees. Sprinkling on water, and taking out the frost without evaporating the moisture will prevent injury of freezing.

EFFECT OF THE SUN UPON PLANTS.

Mr. Gillingham.—The north side or a shelter in this climate is the best, where protection is afforded from the rising sun, which takes out the frost too suddenly.

Mr. Saul.—Plants are injured by heat from any source when in a frozen condition. When they become frosted, instead of placing them in a greenhouse, take them into a celler where, by being thawed out gradually, they will not be injured.

An interesting discussion here followed upon the effect of freezing upon the sap of trees, Major King remarking that he thought the character of the sap was changed by frost.

Mr. Curtiss.—Will sap once frozen be more likely to ferment at a lower degree of temperature than if it had not been frozen?

Prof. Taylor.—I think it will.

Mr. Curtiss.—We have had sap frozen a great deal when making sugar, but never perceived any difference in the sugar except that it may have been a little weaker, which however, was not proved.

Prof. Saunders, of the Agricultural Department, was inquired of, in regard to the weather, and said—

Mr. Saunders.—We don't know anything about it. We may talk all day, but will arrive at no conclusion. The first question is does the sap freeze in healthy trees? My opinion is that it does not. The sap is the life of the tree.

Major King.—Why is it that in the spring early vegetables that have become frosted can be restored by watering them, while those not watered will be lost?

Mr. Saunders.—Of course, frost will injure plants, but this is all we can say. A plant is destroyed by frost when all the moisture is absorbed;

otherwise, it can be saved if the remaining moisture can be retained, but the sun shining upon a frozen plant absorbs the rest of the moisture, and therefore destroys it. The tree that has perfectly ripened its wood will not be frozen, because it has no sap; and though frost may kill a plant, that is only secondary—the main injury has been done before. The frozen sap theory, as it is called, has obtained more or less for thirty years; but if that is one cause of injury, it is not that alone, for we see trees injured that have thoroughly matured their growth. Cold is only a relative term. It is pretty well understood that it is possible to suppose a degree of cold that will freeze everything. Injury from frost depends upon the amount.

Prof. Taylor.—I think it depends upon the condition of the sap; a small portion of oil placed about water will prevent its freezing altogether.

Mr. Saunders.—In the green-house this morning the plants were found frozen, but by closing it and letting on the steam until the plants were saturated with the moisture, they recovered.

Mr. Curtiss.—My opinion is that the operation prevented evaporation, and that no degree of cold, under the same circumstances, would have killed them. It is the manner of extracting frost that will prevent injury.

Mr. Gillingham.—In a pear orchard in Virginia, situated in a hollow, nearly every tree was affected with blight; while I have an orchard on a hill, exposed in every direction, and have never seen any appearance of it. It has been stated that blight has been caused by excessive heating of the sap.

Mr. Saunders.—In hollows, the trees are exposed to extremes of temperature. The best way is to select high ground, and then protect from the cold winds, by screens of shrubbery or bushes.

RAISING OF PEAR STOCKS.

The following resolution was offered by Jas. L. Smith, which was received and read by the secretary.

Resolved, by the Potomac Fruit-Growers' Association, that the nurserymen of our country are respectfully solicited to select seeds of hardy, healthy varieties of pears, not liable to blight, such as Sekle, Bloodgood, Duchess d'Angouleme, and others, to grow for stocks to engraft on. The present mode of importing stocks from Europe is a mistake, as European varieties are, many of them, very liable to blight, and thus the great fatality, in some measure, by blight in our pear trees.

Mr. Saul.—As a nurseryman, I cannot agree with what Mr Smith states in his resolution, as I have found the imported stocks far superior to the native, being less disposed to blight. Not only is that my experience, but it is that of all nurserymen who have had any experience in the growing of pear trees; why, I cannot say. The same is true, also, of quince stocks, those imported from France being far superior to those grown in this country. I deal largely in pear stocks, and the first question I am asked by purchasers is, whether they are grown here, or imported. If the former, they are not wanted.

Mr. Saunders.—I think that the resolution assumes a fact that does not exist. I question whether the disease is more frequent in Europe than it is here. It is not a fact, that imported pear stocks are more liable to blight—but the reverse is the fact; therefore, the resolution assumed what is not a fact.

Mr. Gillingham.—I have tried to raise pear trees from native stocks, and it was a complete failure.

On motion of Prof. Taylor the resolution was laid on the table.

Mr. H. D. Smith, presented an apple known as the middle apple, which he stated was found only in Herkimer county, New York. He recommended it as a good keeper and the best flavored winter apple grown, and said that he would have some scions for distribution, so that it might be ascertained whether it would be suitable for this section.

Mr. Gillingham stated that New York winter apples were not improved by being brought here, as was the case with some of the summer varieties.

In this connection it was argued, and generally conceded, in regard to the winter apple trees of our own country, that young *winter* apples trees, grown in the Southern States are hardier, safer, and produce better quality of fruit, than the young trees brought from Northern States; and even further, that Southern trees caried North will produce better fruit there than those raised there; and it is certainly worth while for Northern orchardists to make the trial; Southern growers have already become satisfied of the fact, by trial and observation for years.

Make *home* happy and attractive as possible; as every family's *home* should be the most attractive place known; so that, though the members may find pleasure in frequently leaving it, for a short time, on business or for visiting, yet they will always be glad soon to return; and will feel that *there* they are sure to find their best and most numerous delights; especially the younger people should feel that their home is the most desirable place in the world, and that they will not wish to leave it, except from necessity or duty, for any other spot.

And no class possess so many means and facilities to make their homes surpassingly happy and comfortable as the farmers, if they will but improve all their advantages; but this is, too often, sadly neglected, particularly in an intellectual point of view. Too many farmers do not supply their homes with any reasonable amount of good mental food and attractions, such as interesting books and magazines; and hence, their children are generally too eager to get away and live in town, where they hope to find richer stores to please the curiosity of their minds. Let parents take more liberal pains to furnish their family circle with abundance of books on history, biography, travels, sciences, and proper romances, and encourage their reading in leisure hours; and also, provide a reasonable amount of innocent, free amusements, sharing themselves in them; and they will soon find that the farmer's life is not a mere drudgery; nor will their children, when partly grown, be so anxious to fly away to the city; and the agricultural class will not be so largely robbed of its more ambitious, enterprising or intellectual youth; but, will happily discover that *that* profession presents the largest and most varied field for mental labor, elevation and enjoyment, of any among men—and noblest of all. D. S. C.

A certain way to be cheated is to fancy one's self more cunning than others.

Grape Culture.

KIND OF GRAPES TO GROW.

To the Editors of the Maryland Farmer:

According to promise I will now give you the names of such grapes as I have either already tried in my vineyard, or have examined and tasted during my travels. I will do so not only in regard to table grapes, but particularly to those best suited for making wine. I wish it distinctly understood, however, that the description will not apply to all climates, and to all soils and situations, for perhaps in two years from now certain grapes will only be cultivated in certain parts of the country, and other grapes in other parts, and not as at present, the same varieties cultivated on all soils and situations. By deciding upon the best wine grapes, we must have an eye upon the tastes of the people. For the last six to ten years vintners in Missouri, Illinois and Iowa, considered the Norton's Virginia as their standard grape for wine; in Ohio the Catawba, and later the Ives Seedling. Both the Norton's in Missouri and the Ives' in Ohio, brought uncommonly high prices, but for the last few years the taste of wine drinkers has vastly changed. Light white vines have taken the place of the heavier red wines, and Norton's Virginia can now be bought in Missouri for from one dollar to one dollar and a half, instead as formerly for five to six dollars per gallon; not because those wines are not worth a higher price, but because they are too heavy as a common beverage, and for medicinal purposes the demand is not up to the supply. White wines being more in demand, now comes the question, which grape will make the best white wine? taking hardiness and productiveness into consideration. Heretofore the Catawba was exclusively raised for white wine, but it was found so fickle in its bearing, and subject to so many diseases, containing generally so much acid, that it would not remunerate the cultivator.

There are now many light colored grapes which would made white wines, but the most of them would certainly maLe only a very inferior wine. I I have no faith in any grape, a hybrid from the Chasselas and others of the kind, that were never wine grapes. In Missouri they raise the Cunningham, Rulander and Louisiana, for white wines, but beyond certain localities, even in that State, not many of these vines are raised. From all I have seen and tasted, I came to the conclusion to raise in the future the following grapes for wine:

The Concord grape makes a wholesome Schiller wine for every day drink, and is, on account of its low price, accessible to almost every one. The Martha, a white seedling of the Concord; it is finer and sweeter than the parent, is hardy, healthy and productive, and if a vine does not produce quite as many pounds as the Concord, it makes up in quality, both for wine and the table. The Delaware is now so well known that no further description is necessary. It makes a superior white wine, and whoever has a favorable and suitable location, should plant it largely. The Herbemont makes, according to my taste, an excellent white wine, and is a sure and heavy bearer. It requires protection in winter farther North, and even in Missouri, but there is an old vine on Mr. Noah Walker's farm, in the rear of my place, that is exposed to all the winds and which was only once cut down by a cold winter for many years, and two hundred more, which stood the last two winters very well. Mr. C. W. Ridgely, near Lutherville, praises them very much, without saying anything about protection in winter. The Iona is comparatively a new grape, originated by Dr. Grant. I am sorry to say that on account of a prejudice against the man, I have neglected to introduce it sooner into my vineyards. As a white wine it takes the place of the Catawba, but considered far superior. The vine is healthy, hardy and productive, and the berry sweet to the center. The only drawback with it is, its fruit does not ripen evenly, owing to its roots running only a few inches under the surface of the ground — Having purchased some root plants for next spring's planting, I shall try, by deep plowing and subsoiling the land, and with bone dust or other fertilizers deeply inverted, to encourage the roots to grow deeper into the soil. Its wine will rival the best white wines in this country.

Lindley M. Ferris and Son, Poughkeepsie, N. Y., have one year old root plants for sale at $35 per hundred, too high a price to plant them largely.— The Croton, one of the best white grapes, raised in the open air, that I have tasted in this country, although a hybrid of foreign grapes, seems to combine the hardiness of its native, with the better quality of its foreign parent. Its taste to me is decidedly that of a wine grape, yet I would advise my friends to try but a few at first. I shall also plant next spring a hundred or so of Allen's Hybrids, a very fine white grape indeed for the table, as also a few of the Rebecca, but I am really afraid to go largely into both. The Irving, from the same propagator, Mr. Stephen A. Underhill, Croton Point, N. Y., is a beautiful showy white grape, larger than the Croton. I had both the Croton and Irving in bearing last summer. The vine is hardy and healthy. Have not tasted it, having been absent from home at the time of ripening. The above varieties for white wine, and some for table use, I have either already established in my vineyards, or intend to plant them next spring. The Roger's Hybrids I have already in my vineyards—the Nos. 1, 2, 3, 4 and 22. They have done badly with me. I have seen all the numbers at the fairs in Rochester and Hammondsport, N. Y., and did not see any of them that recommends them over varieties already on our lists. I heard recently, however, better reports of them from the neighborhood of Lutherville, in Baltimore county. I am pleased to hear that they will do better in other localities than my own.

Yours, truly,

G. H. MITTNACHT.

Baltimore County, Md.

The Florist.

FLORICULTURE---FOR FEBRUARY.

PREPARED BY JOHN FEAST, Florist, Baltimore.

As the season advances, there will be plenty of work in this department,—first, in the preparation of Hot beds, and everything connected with the planting of various seeds for early flowering plants, the houses will require more care; as many kinds of plants go out of bloom, they should be headed in so as to form handsome shaped specimens, the propagation should go on of the various things wanted at the time of planting out in the open ground, if not a sufficient quantity on hand. Numerous plants will require repoting in larger pots, and everything be in readiness when the spring opens; the work thereby will be considerably forewarded.

Camellias will now be in full flower, and as they begin to grow, should be watered more freely and syringed occasionally; grafting should now be done to increase the stock, and cuttings put in for a young stock.

Pelargoniums will now begin to show, but keep them as cool and dry as possible; they will flower much better by it than by exciting them into growth. Fumigate at times to keep down the Aphides, and repot such as need larger pots; if the plants draw to one side turn them around to avoid unsightly plants.

Azaleas will soon be in flower; see that the plants are clean and free from thrips, which is fatal to this plant, if allowed to remain; a wash of Whale oil soap, not too strong, will destroy it by frequent application, if they have been long on the plants; repot all young plants if needed and be carefull in watering that the roots be thoroughly wet.

Spring flowering plants such as *Cinerarias, Calceolarias, Pansies*, &c., for show should be carefully attended too; and repot as they grow, giving plenty of drainage, and a little Guano water once a week.

The tender plants such as *Marantas, Draceuas, Caladiums, Gloxinias, Gesnerias* and *Plectonias*, should be repoted in light rich soil, and kept in a warm place till they begin to grow. All stove plants would be better by shifting if they require it, or fresh drainage, which adds much to the health of the plants. *Fuchias* growing freely should be encouraged; give them pot room; watering with liquid water at times will benefit them very much.

Propagation of all soft wooded plants may be now done to increase the stock; repot such as need larger pots.

Seeds of various annuals such as *Phlox Drumondii* and others, sow in pots or boxes, and transplant in small sized pots, to turn out in the bordors at the proper time.

Ferns will begin to grow this month, repot and syringe them at times, but do not give too much water.

Cape or hard wooded plants such as *Acacias, Coreas, Cape Jasmines, Eutaxias, Diosmas* and *Heaths* should be looked after; if they need larger pots have it done, and propagate such as are wanted

Tender Bulbs, such as *Sparaxis, Ixias*, and *Ornathogalums* will need sufficient water when in flower. *Cactuses* will require more water; give them larger pots when needed.

Gladiolus, Tuberoses, Lilliums and *Amyrillus* report for an early bloom in such sized pots as may be required.

Dahlies, for propagation, should now be separated and put in sand with a little bottom heat.

Plants in Frames.—Give these plenty of air; and keep free from dampness which is fatal to them.

Verbenas.—Those that have struck root repot, and sow seed of the best kinds.

Carnations will now show signs of flower buds; tie up neatly, and repot, if necessary.

Creepers and all trailing plants, tie up after being pruned properly, and put in cuttings of such as may be wanted.

Auriculas and Primroses may be now divided; encourage their growth by giving at times Guano water.

If the weather is fine this month, much may be done such as pruning, transplanting, &c, and getting everything in order in the garden. The earlier this is done the better if you would be sure of success.

DOMESTIC RECIPES.

Fried Chicken.—"Our folks don't allow me to put a single drop of water in it," said the good cook to a neighbor, "I just season the flour well that I roll the pieces in, and when the lard is hot I put them in and let them cook very *slowly*." Well, I tried that way and thought it not so good as it might be. I also rolled the pieces in the seasoned flour and when the mixture of lard and butter was hot and slightly brown, I put in the pieces of chicken and covered up closely, and very soon they were ready to be turned and then were soon done and dished, and the flavor seemed finer and the meat much more juicy. I had the fire pretty quick but not enough to burn the meat. We might as well keep trying and learn the best way to prepare every dish, as our health depends so much on healthy food.

Brown Bread.—Take three quarts of good yellow Indian meal and three pints of rye, sift them togethor that they may be thoroughly mixed; then add one teacupful of molasses, two heaping spoonsful of saleratus of soda, half a teaspoonful of salt, half a pint of boiling water, or about two quarts of good sour milk, or enough to stir easily with a spoon. Put it in a small milk pan, or in a brown bread kettle, if you are lucky enongh to have one, and bake in a moderately hot oven. After it is removed from the oven, let it stand a few hours to cool, and commence cutting it around from the bottom, and if you don't say it is the *best* brown bread you ever tasted, I will acknowledge I am no judge.

Receipt for Sausage.—To twelve pounds of meat add four tablespoons, not too full, of salt, six tablespoons of sage three tablespoonsful of black pepper, and to fifty pounds of meat add a teaspoon of saltpetre.

Hog's Head Cheese.—Put a hog's head in salt and water for two days, then wash and scrape clean, and boil until all the bones come out. Take it up, pick all the bones out and chop it fine; season it with sage, pepper, salt and a little cayenne, with a small spoonful of spice. Put it in a cloth or tin pan, cover it, and put heavy weights on to press it When cold take it out of the mould and cover it with vinegar. Cut it in slices for the table as cold souce, or beat it up and fry it, with or without butter.

Ladies Department.

THE STRAINS THE ANGELS SING.

It came upon the midnight clear,
That glorious song of old.
From angels bending near the earth,
To touch their harps of gold;
"Peace to the earth, good will to men,
From heaven's all-gracious King!"
The world in solemn stillness lay,
To hear the angels sing.

Still through the cloven sky they come,
With peaceful wings unfurled;
And still their heavenly music floats
O'er all the weary world.
Above its sad and lowly plains,
They bend on heavenly wing,
And ever o'er its Babel sounds,
The blessed angels sing.

Yet with the woes of sin and strife,
The world has suffered long;
Beneath the angel strain hath rolled
Two thousand years of wrong!
And men at war with men hear not
The love song which they bring;
Oh, hush the noise, ye men of strife!
And hear the angels sing.

And ye beneath life's crushing load,
Whose forms are bending low;
Who toil along the climbing way,
With painful steps and slow;
Look now—for glad and golden hours
Come swiftly on the wing;
Oh, rest beside the weary road,
And hear the angels sing!

For, lo! the days are hastening on,
By prophet words foretold,
When, with the ever circling years,
Comes round the age of gold;
When peace shall, over all the earth,
Its ancient splendor fling,
And the whole world send back the song
Which now the angels sing!

FEMALE INFLUENCE.

The influence of cultivated female intellect upon the social and religious welfare of mankind, cannot easily be overrated. If civilization and Christianity have elevated women in the scale of being, she has a thousand fold repaid the debt. Heathenism alone has debased her, and the light of divine truth will, without doubt, fully restore her to her original rank and position. Indeed it has already done this, as far as its principles control opinion and action. As opportunity and public opinion have permitted, she has herself stepped forward, and gently, but firmly grasped the wand which waves over the circle of her influence. From this elevation, with the love of God in her heart, and the accents of affection on her tongue, she is destined to become the chief source of light and blessing to our race.

Woman's mind has stamped its impress upon the choicest treasures of modern literature. How many characters have been formed and souls strengthened for honorable and lofty action, by the sound wisdom and gentle attractiveness of Hannah Moore, Jane Taylor, and Mrs. Barbauld! How many stricken hearts have bourn their sorrows with meek and gentle, suffrance, inspirited by the sympathizing strains of Mrs. Hemans and Miss Landon! And how many have bounded with life, and hope, and the love of nature's works, inspired by Mrs. Hemans' more enlivening lays, and those of the gentle pure hearted Mary Howitt! How many may have been made wise, and pure, and affectionate, by th consecrated harp of Mrs. Sigourney! How often has thea happy spirit flitted, in thought, from twig to twig, to the bird-like song of Miss Gould! Thanks to the spirit of the age, to the influence of Christian principle, and to woman's own emancipated intellect, the list of such names is rapidly swelling. The future happiness and prosperity of our race will depend, in no small degree, upon the impulse given to it by cultivated female intellect and heart.

The interests of education will hereafter be committed chiefly to the hands of woman. In her maternal character this has always been more or less true. But the field of her influence has not yet been fully disclosed. The eye has not reached its boundaries. It will still be widening, until the mother's teachings, and woman's affectionate, perseve ring, well directed efforts, shall become, in the hands of God, a mighty agent in the complete conversion of the world. For this task her mental and social qualities peculiarly qualify her. Her discernment and acuteness fit her to guide the mental traveler; her patience and endurance prepared her to bear with his waywardness; and her activity of mind and her affectionate disposition have formed her for that companionship with youth, without which all teaching is but a heavy task to the forming mind.

But still more important will be her influence upon the heart. This is her peculiar home. It is also the only fountain of happiness. It is made so by the wise and immutable laws of our being. God has formed us to be happy only in loving and being loved, in the exercise of kindness and sympathy, in the interchange of good feeling and affectionate remembrance, and in the cultivation of all those sister virtues which formed the bright chain of love. It is woman's favored lot to twine the shining braid, and make strong the tie that binds man to his fellow man, and reaches even to his God above.

Her active sympathy must insinuate itself into the selfishness of man's nature, root out the worldliness of his heart, pacify the angry spirit, shame the turbulence of passion, and point the troubled soul to the true source of happiness on earth, and to an eternal home with the God of peace and love. Evil habits and impure feeling will flee abashed from her presence. Not that her influence will take the place of religious motive and power, but will greatly assist their operation. As she was the first to disobey, so she will be the first to lead man back to obedience and communion with his God.

What must be the character of that class, who are to exert so great a power over our race? It is needless to say, that there must be high purpose, firm resolve, educated minds and holy hearts. To accomplish this, her high destiny, woman *must be educated*. She *must* have a complete and perfect training, a thorough and well adapted *physical, intellectual* and *religious education*.

Reflections on Marriage.

The leading features in the character of a good woman are mildness, complaisance and equanimity of character. The man, if he be a provident husband, is immersed in a thousand cares. His mind is agitated, his memory loaded, and his body fatigued. He retires from the bustle of the world, chagrined perhaps by disappointment, angry at insolent and perfidious people and terrified lest his unavoidable connections with such people, should make him appear perfidous himself. Is this the time for the wife of his bosom, his dearest and most intimate friend, to add to his vexations to increase the fever of an overburdened mind, by a contentious tongue or a discontented brow? Business in the most prosperous state, is full of anxiety and turmoil. Oh, how dear to the memory of man is the wife who clothes her face in smiles, who uses gentle expressions, and who makes her lap soft to receive and hush his cares to rest. There is not in nature so fascinating an object as a faithful, tender and affectionate wife.

Boys and Girls Department.

WHAT I ACTUALLY SAW IN A STREET CAR.

BY UNCLE FRANK.

First, let me tell you what happened on the way to the city. I was driving a spirited pair of horses, which had ran away several times, down the avenue, when a large blue box on wheels, drawn by man power, came up the hill towards us, on the west side of the Stone Bridge, near the Flouring Mills. From the momentary glance circumstances compelled me to give the novel article, I took it to be a hand photographic gallery. Shade of the mighty Daguerre! Is the great art pulled about the streets on a hand cart? Frightened by the strange spectacle, the bay horse jumped, shied, and started off. I pulled up the lines, to rein them in, and as I did so—unfortunate fate!—the cross line broke. Everyone knows how quickly horses become aware of any advantage they possess over their driver when in an excited state. In this case the horses discovered my inability to control them, and the fear of one having aroused the energy of the other, they both galloped off at a furious pace. There we were, rushing down a crowded avenue, exposed to instant death, or a fearful mangling by an unfortunate collision. My aged companion, in a moment of forgetfulness, seized the lines, but I leaned over and told him that the line was broken. He released his hold, and on we went, down the hill, across the bridge, and along the crowded street. When I found the team could not be held up, I endeavored to guide them with the remaining line to avoid passing objects. Aroused by the clatter of our wagon, the teamsters and footmen ahead cleared a passage, and my constant efforts, by voice and line, to soothe and rein up the infuriated beasts, at last succeeded, and going near the curbstone they stopped, a wonderful deliverance; providential; at any rate, we felt very grateful, when so many in similar situations have been maimed or killed. What did I think about it when they were at full speed? The first thought was of the accounts I had read of the disastrous results of runaways; the next feeling was expectation of a similar catastrophe; after that I thought of nothing only to try to stop the plunging animals with the least disaster, and we both kept our places, awaiting results; from all which we have another illustration of the good maxim, "Don't give up the ship."

Now about the street car. We had been away down town, and got into a car to ride up. As the car proceeded on its journey, passengers began to pour in. It was about dusk in the short days, when people are just leaving their business or pleasure for home,

> —"the spot of earth supremely blest,
> A dearer, sweeter spot than all the rest."

All the seats were occupied when a plainly dressed woman entered the car. Instantly, an old gentleman sitting next the door, and two young gentlemen sitting opposite, arose and offered their seats. Turning to the old gentleman he thanked him, but could not take his seat on account of his age, but said she would occupy one of the young gentlemen's seats with gratitude. Other passengers came in, and both sitting and standing room were getting full. On went the car, and stopped again. This time a mother got in with a baby in her arms, and a small child, burdened with the weight of three earthly years about, followed her. The mother was plainly but comfortably dressed; so were the children. I am sure the little toad that followed his mother must have been named Chubb—"Little Chubb" I always call him, when I think of or narrate the incident, for he waddled in like a gosling, his own natural plumpness assisted by the wrappings that were around him, made him appear almost as broad as long, which is not saying much. Now, I had previously noticed on the seat opposite me a little girl about eleven or twelve years old, who appeared to be traveling alone; beside her sat a plainly dressed young lady. Next to her sat a youth about sixteen years old. Two gold studs glistened on his shirt bosom; between them shone a diamond gem set in a gold breast pin; gold sleeve buttons were on his wristbands; a gold chain hung prominently across his black vest, and his hand was so arranged on the lap of his coat as to exhibit a gold ring which he wore on his finger. I presume his gold chain was terminated by a gold watch, and I presume, also, that his garments were of the fashionable kind. Perhaps I should have said that these ornaments were apparently gold and diamond, but as I had no means of judging their genuineness I give him the benefit of my clear testimony, and my readers may form their own conclusions therefrom.

As soon as "Little Puss" (as I must call the little girl, saw Little Chubb came in, she stretched out her arms instantly and quickly—with the impulse of true womanly nature,—and took him upon her lap. The young lady referred to arose and gave the mother and babe *her* seat, and young dandy retained *his* seat. From the eager manner in which Little Puss reached out for Little Chubb, I at first supposed them to be acquaintances, but as I saw no indications of intimacy between them, I concluded the two parties were utter strangers. Of course we are all members of the same family, and heirs of the same heritage, but *Society* declares us *strangers*. However, Little Chubb gave his mother no trouble during the journey, but sat quiet and satisfied on the knee of his stranger friend. Next we had quite a reinforcement of two or three women and some children, who were soon seated. One young woman held a small child on her lap, and the little one began to play with its hat; several times it escaped from its tiny fingers, but Miss Angelina and the passengers always replaced it without trouble to its guardian.

After a while two elderly women came in; one dressed in black, and the other, more advanced in years, wore the plain bonnet of a Quaker. Of course I had yielded my seat long ago, to a young lady who carried one of those pleasant good looking faces it is a delight to gaze upon. When she saw the old quaker lady, she arose and offered her seat, and the young dandy remained in his place.

"Sit still, my dear," said the old lady.

"I prefer to have you occupy it," returned Miss Angelina.

The old lady took the seat, and the young lady stood up right in front of young dandy. I noticed that the woman in black, who was still standing, looked very inquiringly at young dandy, with a glance which lightened out, "where *are* your manners;" but he had erected around himself a solid rampart, and *self* remained securely entrenched within, and when I left the car Miss Angelina was standing up, and young Mr. Selfishness was still sitting down.

Now for a couple of morals. This young man had made great efforts to make himself attractive by adorning his person with ornaments. Simplicity is the rule of correct taste, it is true, but young persons do not usually discover it, unless proper training has induced them to avoid the error of ostentation. But notwithstanding these efforts, his want of courtesy and true politeness towards those who had some claims upon him, rendered those efforts void and of no effect, and he became prominent to close observers for his lamentable deficiency of the traits and character of a gentleman.

Perhaps he would say in his defense that he had paid for his place and had a right to it. Precisely; and precisely also, it is only when we make a sacrifice of our right and privilege that we exhibit our title to true nobility.

The other moral shows the *heart* which exists among the people in their conduct towards each other. All these persons evinced the fact that economy was a rigid dictator in their expenditures, yet it did not interfere with goodness of heart. Had ostentatious wealth and lavish outlay been thrown thus closely and intimately together, would there have been such cordial manifestations of the tie of the brotherhood? Would not the self indulgence of luxury have been so fearful of stepping over the limits of propriety as to put on the rigid, stereotyped aspect of non-intercourse it usually assumes in public? Propriety is so fearful of contamination from *inferior* persons, that it stifles every impulse that would elevate them! Show me a man or a woman that is always ready to do a little act of kindness for a stranger pilgrim, and I will show you a true-hearted soldier in the battle, and it appears to me that in the final counting of the jewels, many will be bright with unfading lustre that were only ordinary and unnoticed here.

Now, my dear boys and girls, I would like to consult you on a matter connected with *our* Department. How would you like to have a little poetry next month, about a brave soldier who would n't run? Let us take a vote on the subject—what shall it be next month? John and Mary, and William and Susie, and all the rest, get out your paper and pen and ink, and send your vote, and any puzzles or riddles you want printed, (they must all be original—something that has never been published, to Uncle Frank, Maryland Farmer Office.

HERE is a new version of the popular nursery song, "Mary and her Little Lamb:"

> Mary had a little *corn*,
> That grew upon her toe,
> And every where Mary went
> The *corn* was *sure* to go.

For the Maryland Farmer.

INOCULATION THE MOST SAFE AND EFFICIENT MEANS OF PREVENTING INFECTION IN PLEURO PNEUMONIA IN CATTLE.

Since I communicated the matter published in your last issue on Lung Plague, or Pleuro Pneumonia, I have dilligently investigated the subject for the purpose of gaining all information obtainable, and communicate the same for publication in your valuable journal for the benefit of stock owners.

The most valuable and reliable data that I have been able to find, founded on and elicited by investigations and experiments in addition to that derived from Dr. Coleman, conducted in this country, I find in the report of Prof. Gamgee to the Commissioner of Agriculture, published in the Nov. and Dec. No. of the Report for 1868 the following:

Prof. G. says, under the following head, "*Inoculated disease not infectious:* "Years of experience and a large number of observations in various parts of Europe would indicate that when the virus is developed in, or beneath the skin, it remains in the system of the inoculated animal, the lungs are not affected, and there is no communication of the disorder, except by inoculation. It may safely be accepted that *the inoculated disease is, as a rule, not infectious.*" Under "Incubation of the poison," Prof. G. says, "It may lie latent in the system for a considerable time. Usually the period required for producing obvious symptoms of sickness, extends through thirty to forty days, but during this period it is producing local effects, as proved by the results of inoculation, which is obvious nine days after the operation."

TRANSMISSION.

All my investigations establish the conviction that an animal having once had the disease, is incapable of reproducing it. A few cases of relapse have occurred, though they have been very rare, and it is generally conceded that this disease, like other epizootics, seldom, if ever, attack the same subject more than once, hence there is greater safety, in purchasing animals from a herd in which the disease prevailed some months since than from one which has been exempt from the disease in infected districts.

HOW THE DISEASE IS TRANSMITTED.

I find that this disease prevails to a much greater extent in dairy and fattening herds, into which purchased animals are periodically, and in many instances, frequently introduced, which are liable to bring the disease into a sound herd, exposing it to the infection.

BREEDING DISTRICTS GENERALLY EXEMPT.

Breeding and exporting districts are usually exempt from this malady, the only means of introducing it, being by the purchase of males for improving the stock, which are liable to have been exposed to infection.

THE IMPORTANCE OF CARE IN PURCHASING.

It is important that purchasers of cattle should not only make diligent inquiry by which to ascertain if the herds from which it is proposed to purchase have been visited by the disease; if so, which animals were affected and have recovered, as such are more secure, against another attack; but it is also important that they should be familiar with all the symptoms of the disease, especially the premonitory.

OBVIOUS PREMONITORY SIGNS.

The first sign of the disease is usually, shivering fits, as in ordinary fever; they are transient and sometimes of so mild a character as to be unobserved by the inexperienced. The coat of the animal stares, and the skin appears rigid.

An occasional, husky, dry cough is generally noticeable, particularly if the animal is caused to move suddenly. Animals with the disease well defined sometimes continue to thrive for some days and the secretion of milk in cows continues, and there is an apparent fulness of the stomach and bowels which is occasioned by bloating.

The excrement is usually dry, and the urinary secretion less than natural. As the malady progresses, it is attended with loss of appetite, the gait is slow and tottering, and if in a yard or field the sick animals separate themselves from the well, the head is extended, and the nostrils irregularly expanded at each inspiration. Disturbance, or sudden movement, produces more rapid respiration, and an audible grunt. Later, the eyes appear fixed with a general expression of pain in the countenance. In a close, warm stable the pulse is more rapid and the progress of the disease more accelerated than when the animals are out, if the weather is fine.

Exposure to cold storms, or draughts or currents of air in the stable augment the symptoms and hasten the period of fatality.

The respirations under such exposures, often rise to forty per minute; they are labored, and nearly every respiration is accompanied by a grunt.

By pressure on the back, or in the region of the lungs, the grunt is more audible.

No symptoms of the disease is probably more reliable than the grunt. In the early stages of the disease, if the animal is caused to move briskly, a watery discharge will be seen at the nose, and ropy saliva from the mouth. The thirst is increased. When the lung has become seriously affected it is generally confined to the left, and the animal seems to prefer to lie on the affected, more than on the well side, grinding of the teeth, listlessness, diminished secretions, weakness, and a disposition to lie more. The grunting more frequent and more distinct, bloating, distortion of the muscles of the month, and great weakness in the hindquarters, with a weakening, accelerated pulse, often up to 120, all attend the latter stages of the disease.

I have been thus particular in describing this disease that cattle owners may be competent to recognize it, should it attack their animals, in which case they should loose no time in having all inoculated.

I am satisfied that skilful and timely inoculation is more judicious than destroying all exposed animals of a herd in which the disease has appeared. Animals attacked should be removed from the herd at once, and the balance should be inoculated.

Very respectfully, yours,

J. WILKINSON.